

UMASS/AMHERST



312066006751197

LIBRARY

OF THE



MASSACHUSETTS
AGRICULTURAL
COLLEGE

SOURCE Gift-----

630.06

ln8m

v.1

CHAPEL

This book may be kept out

TWO WEEKS

only, and is subject to a fine of TWO
CENTS a day therea
the day indicated bel

DATE DUE			

CARD



INTERNATIONAL INSTITUTE OF AGRICULTURE

. . .

MISCELLANEOUS PUBLICATIONS


Volume 1

41

TABLE OF CONTENTS

1. Statement concerning the institute.
2. Letter to Mr. Perkins relative to the institute. 1909.
3. The Institute and cooperative banking. 1909.
4. Resolution passed by the national grange. 1910. 2 copies
5. Price Fluctuations in the staples: their influence on the welfare of the state. 1910. 2 copies.
6. Its Labors in behalf of economic betterment. 1910.
7. General introduction to the bulletins of the bureau of agricultural intelligence and of diseases of plants. 1910.
8. Report of the delegation of the U.S. to the general assembly of the institute. 1911.
9. Message from the president of the U.S. concerning creation of institute. 1906.
10. Its influence on economic welfare. 1911.
11. Raiffeisen System of rural cooperative credit, its adaptation and adoption in the U.S. 1912.
12. L'Activite de l'Institut. 1912.
13. Le Present et l'Avenir de l'Institut. 1912.
14. Su Importancia para la America Latina, en especial para Chile. 1913.
15. Message from the president of the U.S. concerning the general assembly of the institute. 1913.
16. Board of Agriculture and fisheries. The Institute- Its objects and its publications. 1913.
17. The Landschaft. Co-operative rural credit. 1913.
18. Pamphlet concerning the institute. 1913.
19. The Way out of the rut. 1913. 2 copies.

MAY 7 1920



Digitized by the Internet Archive
in 2011 with funding from
Boston Library Consortium Member Libraries

TABLE OF CONTENTS (cont.)

20. Concerning the international year book of agricultural statistics. 1913, 1914.
21. Steadying the world's prices of the staples. 1914.
22. Proposal for an international conference on the regulation and control of ocean carriage by means of an international commerce commission.....
23. Concerning the fourth volume of the International year-book of agricultural legislation. 1915.
24. Letter to Senator Hiram W. Johnson on the work of the institute. 1918.
25. Our foreign trade after the war. 1918.
- 26.

INTERNATIONAL INSTITUTE OF AGRICULTURE AT ROME

MESSAGE FROM THE
PRESIDENT OF THE UNITED STATES

TRANSMITTING

THE REPORT OF THE DELEGATES OF
THE UNITED STATES APPOINTED TO
ATTEND THE GENERAL ASSEMBLY OF
THE INTERNATIONAL INSTITUTE OF
AGRICULTURE AT ROME
IN MAY, 1913



SEPTEMBER 29, 1913.—Read, referred to the Committee on Agriculture
and Forestry, and ordered to be printed

WASHINGTON:
1913



LETTER OF TRANSMITTAL.

To the Senate and the House of Representatives:

I transmit herewith for the information of Congress the report of the delegates of the United States, who were appointed under the authority of Congress to attend the general assembly of the International Institute of Agriculture at Rome, in May 1913.

WOODROW WILSON.

THE WHITE HOUSE, *September 29, 1913.*

LETTER OF SUBMITTAL.

DEPARTMENT OF STATE,
Washington, September 27, 1913.

THE PRESIDENT:

The undersigned Secretary of State has the honor to lay before the President with a view to its transmission to Congress for the information of that body a report of the delegates of the United States to the general assembly of the International Institute of Agriculture at Rome, appointed by virtue of the provision of the diplomatic and consular appropriation act, approved April 30, 1912, for the attendance of delegates at the assembly.

Respectfully submitted.

W. J. BRYAN.

THE PRESIDENT,
The White House.

REPORT OF UNITED STATES DELEGATION TO GENERAL ASSEMBLY OF INTERNATIONAL INSTITUTE OF AGRICULTURE, 1913.

WASHINGTON, D. C., *September 22, 1913.*

The SECRETARY OF STATE.

SIR: The delegates on the part of the United States to the general assembly of the International Institute of Agriculture, which held its fourth session at Rome, Italy, May 6-12, 1913, have the honor to submit the following report:

The general assembly is the legislative body of the International Institute of Agriculture. It consists of delegates from each of the countries which are parties to the treaty, dated June 7, 1905, by which the institute was created, and which number at present 53. The general assembly meets at intervals of two years to receive the reports of the president of the institute on its work since its previous session and the reports and resolutions submitted on behalf of the permanent committee and on the basis of these reports to determine the policies and fix the budget of the institute. The permanent committee consists of one delegate from each adhering country. A considerable number of its members spend substantially all their time at the seat of the institute. This committee is not only the principal executive authority of the institute, but also initiates most of the measures which come before the general assembly. In accordance with the terms of the treaty creating the institute, the permanent committee submitted to the various governments some weeks in advance of the present meeting of the general assembly a program of subjects to be considered. Its reports and resolutions on each of these subjects were laid before the assembly at its opening meeting in the form of printed papers carefully prepared by members designated for this purpose.

Each paper, together with various proposed amendments, resolutions, and articles submitted by members of the assembly, was referred according to its subject to one of the four commissions or committees into which the assembly was divided, and in this way received careful discussion. The conclusions of the commissions were then embodied in a formal report to the general assembly, which, in most instances, approved the recommendations of the commissions without change.

At the meeting of the general assembly in 1913, 50 of the countries adhering to the institute were represented by from 1 to 8 delegates, the total number present being 114. The absentees were Egypt, Mexico, and the Dutch East Indies.

Only brief summary statements will be made in this report but the papers presented at the meeting will be published by the institute and can be obtained by those interested.

The general officers of the institute are the president, who is also chairman of the permanent committee, the vice president, and the secretary general. The work of the institute is divided among four bureaus: (1) The bureau of the secretary general, (2) the bureau of general statistics, (3) the bureau of agricultural intelligence and plant diseases, and (4) the bureau of economic and social institutions. The bureau of the secretary general has charge of the personnel, financial and other routine business, the building and its equipment, the printing and distribution of publications, the library and general bibliographical work, and, as a more recent service, the preparation and publication of an annual compilation of agricultural legislation in the different countries of the world.

The bureau of general statistics collects, collates, and publishes statistics of production and commerce in agricultural products, both animal and vegetable, throughout the world.

The bureau of agricultural intelligence and plant diseases collects and publishes information regarding the progress of scientific and experimental investigations and practical experience in agriculture throughout the world, and, as a branch of this work, gives special attention to the diseases of plants and to entomology.

The bureau of economic and social institutions collects and publishes statistics and general information regarding agricultural co-operation, insurance, and credit, together with other matters relating to the economic and social organization of rural communities.

Those publications of the institute which have a bearing on the formation of the price of the staples (such as crop reports, and data on exports, imports, and stocks) are based exclusively on official information, supplied direct to the institute by the adhering Governments.

The other publications are produced from the following sources:

- (a) Information officially communicated by the Governments.
- (b) Original articles contributed by eminent authorities designated by the adhering Governments.
- (c) Excerpts and abstracts of articles translated from the 2,225 official and unofficial periodical publications of the world received by the institute.

The institute prints and publishes two annuals, and three monthly and one weekly bulletins, together with a considerable number of monographs on special subjects. The annuals are on agricultural statistics and legislation, respectively; the monthly bulletins are on (1) agricultural statistics; (2) agricultural intelligence and diseases of plants, and (3) economic and social institutions; and the weekly bulletin is bibliographical. The monthly bulletins are published in the French, German, English, Spanish, Italian, and Hungarian languages. French being the official language of the institute, the editions in that language are paid for from the funds of the institute. Provision for the edition in the other languages is made by the countries interested. The Congress of the United States has made an annual appropriation of \$5,000 for translating and printing the English edition, the rest of the expense being borne by Great Britain and her colonies. This is considered a fair arrangement by the delegates from the United States, and they recommend that Congress should be asked to continue this appropriation.

Within the past two years the institute has brought forth annual publications covering the world's activities in two important lines. The first is the Yearbook of Agricultural Legislation, which records the progress in the domain of law of the world-wide movement for the improvement of the economic and legal conditions of agriculture and rural communities. As a book of reference for legislators, executives, and all others who are interested in the framing and execution of laws on the multitudinous subjects relating to agriculture and country life, this yearbook promises to be of very great value. The second is the International Yearbook of Agricultural Statistics, which contains, in a series of comparable tables, a record of the world's area under the several crops and of their production, with comparable data for the trade in the same and data on the live stock in the several countries. It thus constitutes an inventory of the world's agricultural resources.

In the report to the general assembly the delegate of Germany quoted the following opinion given by the president of the German Landwirtschaftsrat, Dr. Dade, in the "*Zeitschrift für Agrarpolitik*," on this publication:

This manual is indispensable for all bodies representing agricultural interests, for Government functionaries, members of Parliament, and economists. This one publication is in itself sufficient to convince the world of the economic utility of the institute.

Such a publication will be of special usefulness in educational institutions where increasing attention is being given to the economic problems of agriculture and where the lack of reliable and up-to-date manuals on the subjects covered by the yearbook has been keenly felt.

The addition of commercial statistics to those on agricultural production in the monthly Bulletin of Agricultural Statistics is also an important and valuable step of progress in the work of the institute. At present the commercial information thus published relates to exports and imports, visible stocks, and the prices of the five cereal crops and cotton on the principal markets of the world. Valuable as this information is, it can and doubtless will be supplemented by a broad range of inquiries by the institute in the days to come. As was pointed out by Mr. Lubin in an interesting paper presented to the assembly at its recent meeting, it is very desirable that the institute should collect and disseminate information which will show the factors determining the formation of the prices of agricultural products in the world's market centers.

The relative place which the collection and dissemination of statistics should hold in the work of the institute was earnestly and thoroughly discussed in the assembly.

As the institute becomes more firmly established and its value as an international clearing house on economic information is more generally recognized it is met with a constantly increasing demand for the extension of its service along the many lines included in the broad movement of our day for agricultural advancement. Naturally the members of the assembly were individually interested in many different phases of this movement, and thus were inclined to look forward to a day when the work of the institute would be measurably expanded. As a rule, however, they realized that the institute would grow strong only as it did well whatever tasks it

undertook, and therefore were ready to indorse cordially the proposition that the institute should exercise strict self-restraint as regards the multiplication of lines of work; inasmuch as the initial work of the institute had been in the field of elaborating, summarizing, and giving widespread publicity to the current factors which influence the price formation of the staples of agriculture (crop reporting and agricultural commercial statistics), it was agreed that nothing should be allowed to interfere with the progressive development of its function in this direction. This was defined by the assembly to be—

the organizing of a regular international service of prompt, reliable, and complete information on plant and animal production and on the consumption and trade in agricultural staples and their prices.

To this end, the Governments of the adhering countries were urged to make all possible efforts to facilitate the accomplishment of this task by the institute, and the permanent committee was instructed to arrange its budget so as to insure as thoroughly as possible the right development of this service.

The assembly was also much interested in the continuance of efforts by the institute to secure the improvement of the crop-reporting service of the different countries, and in particular the unification of the methods of reporting crop conditions and other agricultural data. It is clear that any measures which are taken by the adhering Governments to bring their agricultural statistics into such form that they will be easily comparable and can thus without difficulty be summarized in the general publications of the institute will be very beneficial and do much to promote the ends for which the institute was established. The delegates from the United States therefore joined heartily in commending the efforts of the institute in this direction and thoroughly believe that whatever our Government may do to assist the institute in this respect will have good results for both our own people and the rest of the world.

Much attention was given by the assembly to the problems involved in the establishment of governmental agencies for the control of plant diseases, and especially to questions regarding the international relations of the control services. It had been expected that the assembly would have for its guidance in these matters the proceedings and conclusions of an international meeting of experts in plant pathology which was to have been held under the auspices of the French Government early in 1913. Unforeseen circumstances had, however, prevented such a meeting, but the French Government had announced its intention to pursue the matter further, and if possible to arrange for this meeting in the spring of 1914. Discussion brought out very clearly that a greater degree of agreement among the experts as to the requirements for a satisfactory control of plant diseases must precede governmental action looking toward international agreements on this subject. The assembly, therefore, wisely confined its action chiefly to indorsing the proposition to hold an international meeting of plant pathologists and to urging the adhering Governments to create services for the control of plant diseases within their own borders. It also recognized the necessity of long-continued study of the problems involved in such control by providing that hereafter at each session of the assembly a committee of specialists in plant pathology from the different

countries should be brought together for the further consideration of these matters.

One of the most important, and at the same time the most difficult, tasks which the institute has undertaken is the selection and summarizing of important articles appearing in current scientific and practical journals and the publication of these summaries in the monthly Bulletin of Agricultural Intelligence. Such work can only be done most effectively by persons thoroughly trained in the different lines of agricultural science and practice and who have at the same time a high degree of editorial insight and the capacity of succinct, accurate, and interesting expression. The services of such persons can not be secured and retained in sufficient number to cover the broad field of agriculture except by the expenditure of considerable money. The institute has keenly felt its limitations in this regard and fully realizes that it has only made a beginning of an important service in this direction. The usefulness of what it has done is, however, generally recognized and it is hoped that in the near future the means will be provided for the further strengthening of this work. Efforts are now being made to secure a wider collaboration of experts in the different countries, and thus to bring the institute into closer touch with those who are most intimately acquainted with the progress of agricultural science and practice throughout the world. Closely connected with this service is the important function of answering inquiries on scientific and practical questions addressed to the institute through the Governments of the adhering countries. With the more complete organization of the bureau of agricultural intelligence the importance of the institute as an international clearing house for agricultural information will doubtless be greatly increased.

As the institute accumulates knowledge and experience regarding agricultural problems, and has a more complete equipment for its work, it will be able not only to disseminate useful knowledge but also to make many wise and practical suggestions for enterprises which may profitably be set on foot either internationally or in one or more countries. The institute is empowered to do this by article 9, letter F, of the treaty (lines 20 to 22 of p. 4), which reads:

Submit to the approval of the Governments, if there is occasion for it, measures for the protection of the common interests of farmers and for the improvement of their conditions.

Examples of this kind of service which the institute is now undertaking may be seen in its efforts to promote the organization of an international meteorological service, to extend the movement for the protection of useful birds, and to encourage a broader study of the problems of dry farming.

The institute has recognized the rapidly growing sentiment throughout the world that both governments and people should give more thorough and serious attention to the economic and social problems of rural communities. Therefore, as a branch of its labors, it has organized the bureau of economic and social institutions. This bureau is giving immediate attention to a study of the present status of agricultural cooperation and presently will supplement its work by the publication of the statistics of cooperation in the different countries. It now publishes its monthly Bulletin of Economic and Social Intelligence dealing with the European systems of cooperative

credit. In this and other ways the institute has materially aided the movement in the United States along this line.

Especial acknowledgment is due the institute for the assistance which it rendered to the United States and American Commissions on Rural Credit, in connection with their recent investigation of this subject in Europe. By arranging for a meeting of these commissions in Rome at the time of the meeting of its assembly the institute brought them into touch not only with the King and Government of Italy, but also with the delegates of the assembly, among whom there were many of the eminent authorities on rural credit systems.

In this way the commissions were enabled at the outset of their European journey to get a general survey of the subject they were to study and to learn much which would enable them to make their studies in the different countries under the most favorable conditions.

The assembly examined and approved the account of receipts and expenditures of the institute for 1911 and 1912, as submitted by the permanent committee, and fixed the budget for 1913 at 898,452 lire, and that for 1914 at 1,106,485 lire. This increase in the budget is necessitated not so much by the expansion in the lines of work of the institute as from the fact that as the present lines of work become established and their usefulness is more apparent, there is a natural demand that the service rendered by the institute shall be more fully elaborated and extended. To meet these requirements the assembly voted to ask the adhering Governments to raise the unit of their contributions from 1,500 francs to 2,500 francs, as provided for in the treaty of 1905. Since the contribution of the United States is on the basis of 16 units, the amount which Congress should be asked to appropriate toward the current expenses of the institute should be increased from 24,000 francs (\$4,800) to 40,000 francs (\$8,000). The desirability of this provision for the growing needs of the institute was so apparent that the delegates of all the adhering countries voted for the increase in the budget and undertook to recommend their Governments to enlarge their contributions.

This was one of the many evidences that the countries which are supporting the institute are now firmly convinced that the work which it is doing is important and valuable. There being no longer any question on these fundamental points, the Governments are more and more interesting themselves in plans for strengthening the institute and developing its activities along the most useful lines. They are also making arrangements on a more permanent basis for doing their part in the management and support of the institute, and for securing from it the greatest advantages which it offers. The delegates from the United States are unanimous in the opinion that the affairs of the institute deserve most careful consideration by our Government, and that every reasonable effort should be made to so organize and develop our relations with the institute that we may contribute in the most effective way to its proper maintenance and that our people may benefit in the highest degree from its activities.

The King and Government of Italy continue to show their vital interest in the institute by generous contributions to its support and by aiding it in many other ways. The delegates from the United States received from the King and Queen, the minister of foreign affairs, the minister of agriculture, and other officials of the Italian

Government, and from the mayor and other officials of the city of Rome many courtesies, for which they desire to make due acknowledgements.

Appended to this report are (1) a list of the delegates to the general assembly from all nations; (2) a recapitulation of the reports, debates, and resolutions of the general assembly; and (3) the following papers submitted by the permanent delegate of the United States: (*a*) His annual report for 1912-13 to the Secretary of State of the United States, with accompanying papers; (*b*) his letter to the chairman of the American Commission on Agricultural Cooperation and Rural Credits regarding the Landschaften system of rural credits; (*c*) correspondence with the minister of finance of Russia on the form of crop reports; and (*d*) a paper read before the general assembly on the Commercial Bulletin and the factors in price formation.

ALFRED C. TRUE.

DAVID LUBIN.

CHAS. W. PUGSLEY.

SPENCER EWING.

THOS. J. BROOKS.

INTERNATIONAL INSTITUTE OF AGRICULTURE.

FOURTH SESSION, MAY, 1913.

NAMES AND POSITIONS OF DELEGATES OF THE ADHERING COUNTRIES TO THE GENERAL ASSEMBLY.

Germany.—Dr. T. Müller, privy counselor, delegate to the permanent committee of the International Institute of Agriculture; M. Delbrück, chief of the imperial bureau of statistics; Dr. Boenisch, privy counselor, imperial ministry of the interior; Baron von Falkenhäusen, privy counselor, Prussian ministry of agriculture; Dr. Behrens, director of the Imperial Biological Institute at Dahlem; Baron von Cetto-Reichertshausen, president of the agricultural council of Bavaria, representative, German agricultural council and German Agricultural Society; Dr. Roesicke, president of the Federation of German Agriculturists; M. Johannsen, vice president of the Agricultural Cooperative Associations of the German Empire.

Argentina.—His Excellency M. E. Portela, envoy extraordinary and minister plenipotentiary of Argentina to His Majesty the King of Italy.

Austria.—Baron Bernhard von Ehrenfels, president of the Imperial Royal Agricultural Society of Vienna, member of the Austrian Reichsrat; Prof. Karl Portele, counselor of the imperial royal ministry of agriculture; Baron Hans de Cnobloch, ministerial counselor of the imperial royal ministry of agriculture; Chevalier Victor de Pozzi, government counselor of the imperial royal ministry of agriculture, delegate to the permanent committee of the International Institute of Agriculture; Chevalier Felix de Weil, chief of the bureau of statistics in the imperial royal ministry of agriculture.

Hungary.—M. Edmond de Miklós de Miklósvár, secretary of state, member of the Hungarian Chamber of Magnates, delegate to the permanent committee of the International Institute of Agriculture; M. Robert de Dubravszky de Stósz, ministerial counselor in the Hungarian ministry of agriculture; M. Etienne de Bernát de Korlat, director of the Hungarian Federation of Agriculturists; M. Jules de Rubinek de Zsitvabessenyő, director of the National Society of Hungarian Agriculturists; M. Zvonimir Zepić, township counselor; M. Tibor de Péchy de Péchyfalú, secretary of the ministry of agriculture.

Belgium.—M. de Vuyst, director general of the rural office of the ministry of agriculture and public works; M. O. Bolle, delegate to the permanent committee of the International Institute of Agriculture; M. E. Marchal, director of the State phytopathological station; M. D. Van Hove, inspector in the phytopathological service.

Brazil.—M. Antonino Fialho, formerly deputy and formerly president of the National Society of Agriculture, delegate to the permanent committee of the International Institute of Agriculture.

Bulgaria.—M. D. Rizoff, minister plenipotentiary of Bulgaria to His Majesty the King of Italy, delegate to the permanent committee of the International Institute of Agriculture.

Chile.—M. S. Aldunate Bascuñan, minister plenipotentiary of Chile to His Majesty the King of Italy, delegate to the permanent committee of the International Institute of Agriculture; M. Enrique Paut Vergara, consul general of Chile at Rome.

China.—M. Shu-Tongchi, attaché of the legation of the Republic of China to His Majesty the King of Italy, delegate to the permanent committee of the International Institute of Agriculture.

Costa Rica.—R. M. Montealegre, minister plenipotentiary of Costa Rica to His Majesty the King of Italy, delegate to the permanent committee of the International Institute of Agriculture.

Cuba.—Dr. C. M. de Céspedes y Quesada, minister plenipotentiary of Cuba to His Majesty the King of Italy, delegate to the permanent committee of the International Institute of Agriculture.

Denmark.—Baron H. Rosenkrantz, grand huntsman of the court; M. A. Oldenburg, secretary of the legation of Denmark to the Government of Italy, delegate to the permanent committee of the International Institute of Agriculture.

Ottoman Empire.—Dr. Mehmed Djemil Bey, delegate to the permanent committee of the International Institute of Agriculture.

Egypt.—

Ecuador.—M. S. Aldunate Bascuñan.

Spain.—M. Enrique Trenor y Montesinos, Count of Montornes, chief of the agricultural service of the Province of Valencia; M. Ignacio Girona y Vilanova, senator, agricultural engineer; M. José Cascon, agricultural engineer, director of the Practical School of Agriculture of Palencia; M. Enrique R. de Célis, agricultural engineer, delegate to the permanent committee of the International Institute of Agriculture.

United States of America.—Dr. Alfred C. True, director of the Office of Experiment Stations of the Department of Agriculture; Mr. David Lubin, delegate to the permanent committee of the International Institute of Agriculture; Prof. C. W. Pugsley, University of Nebraska; Mr. Spencer Ewing, Bloomington, Ill.; Prof. T. J. Brooks, Mississippi Agricultural and Mechanical College.

Ethiopia.—Prof. G. Cuboni, director of the Station of Vegetable Pathology at Rome, delegate to the permanent committee of the International Institute of Agriculture.

France.—M. Dabat, counselor of state, director general of streams and forests of the ministry of agriculture; M. Berthault, director of agricultural instruction and services of the ministry of agriculture; M. Decharme, chief of the service of cooperative and mutual agriculture of the ministry of agriculture; M. Lesage, inspector of agriculture, chief of the office of agricultural information of the ministry of agriculture; M. Dop, vice president of the International Institute of Agriculture; M. Foex, assistant director of the station of vegetable pathology at Paris.

Algeria.—M. Lesage, inspector of agriculture, chief of the office of agricultural information of the ministry of agriculture of France.

Regency of Tunis.—M. Louis-Dop, vice president of the International Institute of Agriculture.

Great Britain and Ireland.—Sir Sydney Olivier, K. C. M. G., permanent secretary of the board of agriculture and fisheries; Sir Robert P. Wright, president of the department of agriculture of Scotland; Mr. T. P. Gill, secretary of the department of agriculture and technical instruction for Ireland; Mr. H. G. Dering, M. V. O., counselor of the embassy of Great Britain to the Government of Italy, delegate to the permanent committee of the International Institute of Agriculture.

Australia.—Mr. H. G. Dering, M. V. O., counselor of the embassy of Great Britain to the Government of Italy, delegate to the permanent committee of the International Institute of Agriculture.

Canada.—Mr. R. F. Stupart, F. R. S. C., F. R. A. S. C., director of the meteorological service of Canada; Hon. Philemon Cousineau, K. C.; Mr. T. K. Doherty, commissioner of the International Institute of Agriculture; Mr. H. G. Dering, M. V. O., counselor of the embassy of Great Britain to the Government of Italy, delegate to the permanent committee of the International Institute of Agriculture.

British India.—Sir Edward Buck, K. C. S. I., delegate to the permanent committee of the International Institute of Agriculture.

New Zealand.—Mr. H. G. Dering, M. V. O., counselor of the embassy of Great Britain to the Government of Italy, delegate to the permanent committee of the International Institute of Agriculture.

Mauritius.—Mr. H. G. Dering, M. V. O., counselor of the embassy of Great Britain to the Government of Italy, delegate to the permanent committee of the International Institute of Agriculture.

Union of South Africa.—Mr. J. B. Moffat, director of the census.

Greece.—M. D. Caclamanos, chargé d'affaires of Greece to the Government of Italy, delegate to the permanent committee of the International Institute of Agriculture; M. Isaakides, agriculturist.

Guatemala.—M. Jules Montefiore, consul general of Guatemala at Rome, delegate to the permanent committee of the International Institute of Agriculture.

Italy.—Marquis R. Cappelli, president of the International Institute of Agriculture, vice president of the Chamber of Deputies; Prof. Vittorio Emanuele Orlando, deputy in Parliament; Count Francesco Guicciardini, deputy in Parliament; Dr. Edoardo Pantano, deputy in Parliament; Dr. Edoardo Ottavi, deputy in Parliament, president of the Society of Italian Agriculturists; Dr. Vincenzo Magaldi, vice president of the council of administration of the national institute of insurance; Prof. Dr. Bartolomeo Moreschi, director general of agriculture; Prof. Dr. Giovanni Montemartini, director general of statistics and labor; Prof. Dr. Vincenzo Giuffrida, director general of credit and of markets; Prof. Dr. Michele Carlucci, chief inspector of viticulture and plant diseases; Prof. Palazzo, director of the bureau of meteorology and geodynamics.

Eritrea and Italian Somaliland.—M. B. Chimirri, deputy in Parliament, delegate to the permanent committee of the International Institute of Agriculture; M. M. Abbiate, deputy in Parliament; M. Alfredo Baccelli, deputy in Parliament; Prof. E. de Marinis, deputy in Parliament; Marquis U. di Sant'Onofrio del Castillo, deputy in Parliament.

Tripoli and Cyrenaica.—

Japan.—M. Otojiro Sasano, chargé d'affaires of Japan to the Government of Italy, delegate to the permanent committee of the Inter-

national Institute of Agriculture; M. Teizo Ito, chief of the section of agricultural industry of the ministry of agriculture and commerce.

Luxemburg.—M. O. Bolle, delegate to the permanent committee of the International Institute of Agriculture.

Mexico.—

Montenegro.—M. E. Popovitch, consul general of Montenegro at Rome; M. G. Volpi, minister plenipotentiary of His Majesty the King of Italy, delegate to the permanent committee of the International Institute of Agriculture.

Nicaragua.—M. V. E. Bianchi, consul general of Nicaragua at Rome, delegate to the permanent committee of the International Institute of Agriculture.

Norway.—M. Thor von Ditten, minister plenipotentiary of Norway to His Majesty the King of Italy; Dr. A. Fjelstad, delegate to the permanent committee of the International Institute of Agriculture.

Paraguay.—Prof. Orazio Comes, director of the Agricultural High School at Portici, delegate to the permanent committee of the International Institute of Agriculture.

Netherlands.—M. H. de Weede, minister plenipotentiary of the Netherlands to His Majesty the King of Italy, delegate to the permanent committee of the International Institute of Agriculture; Prof. Dr. J. Ritzema Bos, director of the Institute of Phytopathology at Wageningen.

Dutch Indies.—

Peru.—M. Louis-Dop, vice president of the International Institute of Agriculture.

Persia.—M. A. del Gallo, Marquis de Roccagiovine, delegate to the permanent committee of the International Institute of Agriculture.

Portugal.—M. F. E. Leão, minister plenipotentiary of Portugal to His Majesty the King of Italy.

Roumania.—M. Georges Lucasiewicz, secretary general of the ministry of agriculture and domains; M. Démètre C. Pennesco, counselor of the legation of Roumania to the Government of Italy, delegate to the permanent committee of the International Institute of Agriculture; M. Georges Arion, agricultural engineer, entomologist of the ministry of agriculture.

Russia.—His Excellency A. Yermoloff, secretary of state; His Excellency M. G. Zabiello, counselor of state, consul general of Russia at Rome, delegate to the permanent committee of the International Institute of Agriculture; Prof. P. I. Broounoff, director of the bureau of meteorology of the scientific committee of the general direction of agrarian organization and of agriculture; M. A. de Jaczewski, chamberlain of His Majesty the Emperor, director of the bureau of mycology and of phytopathology of the scientific committee of the general direction of agrarian organization and of agriculture; M. A. A. Silantieff, expert in ornithology, attaché of the department of agriculture.

Salvador.—Dr. C. M. de Céspedes y Quesada.

San Marino.—His Excellency M. L. Luzzatti, minister of state of the Kingdom of Italy, delegate to the permanent committee of the International Institute of Agriculture.

Servia.—M. Carlo Scotti, consul general of Servia at Rome, delegate to the permanent committee of the International Institute of Agriculture.

Sweden.—Baron C. N. D. de Bildt, minister plenipotentiary of Sweden to His Majesty the King of Italy, delegate to the permanent committee of the International Institute of Agriculture; Prof. Juhlin Dannfelt, secretary of the Royal Academy of Agriculture at Stockholm; Prof. Jakob Eriksson, chief of the section of agricultural botany of the Central Institute for Agricultural Experimentation at Stockholm.

Switzerland.—Dr. Jean Baptiste Pioda, minister plenipotentiary of Switzerland to His Majesty the King of Italy; Dr. Ernest Laur, chef du secretariat of the Union of Swiss Peasants at Brugg. (Aargau.)

Uruguay.—His Excellency M. Rufino T. Dominguez, minister plenipotentiary of Uruguay to His Majesty the King of Italy.

RECAPITULATION OF THE REPORTS, DEBATES, AND RESOLUTIONS OF THE FOURTH GENERAL ASSEMBLY.

The Fourth General Assembly of the International Institute of Agriculture convened in Rome, Italy, on May 6, 1913. At the opening meeting the Hon. Vittorio Emanuele Orlando, first delegate of Italy, was elected president of the assembly, Baron Bernhard von Ehrenfels, first delegate of Austria, and M. de Vuyst, first delegate of Belgium, were elected vice presidents.

The assembly then named four commissions or committees to report to the assembly on the several questions brought up for action, as follows:

COMMISSION I. *Administration and finance.*—To this commission were submitted the following reports from the permanent committee of the institute: Report by the president of the institute, Marquis Cappelli, on the work performed by the institute during the past two years; report by M. Fialho, delegate of Brazil, on the finances of the institute.

COMMISSION II. *General statistics.*—This commission considered the following reports from the permanent committee: Report by Dr. Müller, delegate of Germany, on crop-reporting and agricultural statistics; report by M. Zabiello, delegate of Russia, on commercial statistics (exports, imports, stocks and prices); report by Chev. de Pozzi, delegate of Austria, on the statistics of live stock.

COMMISSION III. *Agricultural intelligence and plant diseases.*—To this commission were submitted, on behalf of the permanent committee, a report by M. Pioda, delegate of Switzerland, on the statistics of fertilizers; a report by M. Louis-Dop, delegate of France, vice president of the institute, on the organization of an international service of agricultural meteorology; a report by Prof. Cuboni, delegate of Ethiopia, on an international agreement for the control of plant diseases; and reports by M. de Miklos, delegate of Hungary, on the results of an inquiry into the measures taken by the adhering countries for the protection of useful birds and on dry farming.

COMMISSION IV. *Agricultural cooperation.*—This commission considered a report by M. Bolle, delegate of Belgium, on insurance against damage to crops by hail, and a report by Chev. de Pozzi, delegate of Austria, on the statistics of agricultural cooperation.

The president called on the spokesman of each delegation to state on which commissions such delegation wished its members to serve.

Dr. True, as chairman of the American delegation, made the following announcement:

Commission I: Dr. True and Mr. Lubin.

Commission II: Dr. True, Prof. Pugsley, Mr. Lubin.

Commission III: Dr. True, Prof. Pugsley, Mr. Ewing.

Commission IV: Dr. True, Prof. Pugsley, Mr. Lubin.

The commissions then proceeded to elect their presidents, vice presidents, and reporters, as follows:

Commission I: President, M. Chimirri, delegate of the Italian colonies; vice president, Dr. True, delegate of the United States; reporter, Baron Hans de Cnobloch, delegate of Austria.

Commission II: President, M. Delbrück, delegate of Germany; vice president, M. de Rubinek, delegate of Hungary; reporter, M. Lesage, delegate of France.

Commission III: President, Sir Sydney Olivier, delegate of Great Britain and Ireland; vice president, M. de Jaczewski, delegate of Russia; reporters, M. Brounoff, delegate of Russia; M. Foex, delegate of France; M. Laur, delegate of Switzerland.

Commission IV: President, M. Decharme, delegate of France; vice president, M. de Bernat de Korlat, delegate of Hungary; reporter, M. Girona y Villanova, delegate of Spain.

The meeting then adjourned.

On Saturday, May 10, and Monday, May 12, meetings of the general assembly were held, at which the reports and recommendations of the four commissions were brought in and considered and various resolutions adopted. The business thus transacted by the commissions and the general assembly was divided under the following heads:

1. Review of the work of the institute since the last general assembly.
2. Financial status of the institute.
3. Status and development of the crop-reporting and agricultural statistical work of the institute.
4. Status and development of the work of the institute in the field of commercial statistics (exports, imports, stocks, and prices).
5. Proposal for an international service of statistics on live stock.
6. Proposal for an international service of statistics on fertilizers.
7. Statistics of agricultural cooperation.
8. Statistics of crop insurance against damage by hail.
9. Status of the institute's work in promoting an international service of agricultural meteorology.
10. Proposal for an international agreement for the control of plant diseases.
11. Protection of useful birds.
12. Dry farming.

It will be convenient to deal with these matters under their separate heads.

1. REVIEW OF THE WORK OF THE INSTITUTE SINCE THE LAST GENERAL ASSEMBLY.

The president of the institute, Marquis Cappelli, in his report on the work of the institute, pointed out that since the last general assembly (May, 1911) five more Governments have ratified the treaty of June 7, 1905; i. e., Paraguay, Union of South Africa, Guatemala, Dutch East Indies, Tripolitania and Cyrenaica, bringing up the number of adhering countries to 53. Since that date the English edition of the institute's publications has been placed on a permanent and self-supporting basis. In accordance with the proposal submitted by the American delegation to the assembly in 1911, the Congress of the United States appropriated \$5,000 as a contribution toward the cost of translating and printing this edition, and the subscriptions of Great Britain and the British colonies cover the other half of the expenses. In accordance with the same system an Italian edition was brought out last year, the cost of which is met by subscriptions and by a sum of 25,000 francs, which the Italian Government has promised to provide for. The delegates of the German-speaking States prepared an elaborate plan by which, with the generous assistance of their governments, they have secured the sum of 50,000 francs to cover the cost of the German edition. A Spanish edition, for which Chile and Argentina have already guaranteed substantial sums, and to which Spain will also contribute, has recently appeared. The Hungarian Government and the Society of Hungarian Farmers have arranged for an edition in the language of that country. Thus the bulletins of the institute now appear in six languages—French, English, German, Italian, Spanish, and Hungarian.

Reviewing the financial situation of the institute the president pointed out that the international treaty of 1905 fixed the unit of contribution payable by the adhering countries at a sum not to exceed 2,500 francs per annum, with the proviso that during the first two years the contribution would be 1,500 francs (art. 10 of the treaty). According to the group in which an adhering country decides to rank, the number of units of contribution which it pays varies from 1 to 16. Although the first two years (during which the unit of contribution was not to exceed 1,500 francs) expired three years ago, the institute has not hitherto asked that the unit be raised to the 2,500 francs provided for in the treaty; but now the needs of the institute require that this be done. The institute therefore requests the Governments that the unit of contribution may be raised to 2,500 francs, beginning in 1914.

The president then went on to review the work done by the several bureaus. He called attention to a new and important publication prepared by the bureau of the secretary general, the Yearbook of Agricultural Legislation, containing a collection of all the laws relating to agriculture promulgated in the whole world during the year and provided with an index arranged according to subject matter and countries. Considering to what an extent legislation is now concerned with such matters as small holdings, reforestation, farm improvement and land reclamation, agricultural statistics, cooperation, credit and insurance for the farm, and with provisions more or less closely related to the technique of farming, the control of plant

diseases, the promotion and protection of the trade in the various staples, etc., it is evident that this collection will be of real value to legislators and students of these subjects. The yearbook for 1911 was published at the close of last year; that for 1912 has just been issued.

The work of the bureau of general statistics has considerably increased during the last two years, and the president noted with satisfaction that the institute's crop reports are now recognized as the authoritative reports by the press of the world, and that on all the market centers contracts relating more especially to cereal crops are being based on the institute's forecasts and reports. While it is true that a number of States are not yet adequately organized to provide reliable crop statistics, yet the propaganda carried on by the institute showing the practical utility for each and all of such uniform statistics has already been the means of securing notable improvements in this service in the several countries and will doubtless bring about the desired results in all the States. During the last two years the information service has been extended to sugar beets, sugar cane, vines, coffee, tobacco, flax, and silk, in accordance with the decisions of the general assembly in 1911. Reports on these staples were first given in the crop-reporting bulletin in January, 1912.

During this same period the bureau has organized the service on commercial statistics. The Commercial Bulletin began to appear by way of trial in January, 1912. In March, 1913, it was given publicity and is now incorporated with the Bulletin of Agricultural Statistics. The information it gives relates to exports and imports, visible stocks, and the prices of the five cereal crops and cotton on the principal markets of the world.

The first volume of the International Yearbook of Agricultural Statistics was published by the institute toward the end of 1912. The president says:

It has been highly appreciated by the governments and by men of science.

Speaking of the work of the bureau of agricultural intelligence and plant diseases, the president stated:

When we consider the extent of the material it has to examine, we easily understand how complex is the work of this division: Physics; chemistry; microbiology of the soil and of plants; hydraulics, embracing the vast subject of land reclamation and farm improvements; agricultural meteorology, a new science of capital importance; fertilizers and manures, with the discoveries constantly being made in that field; all the special crops of different zones, with the studies of which each of them is the object; rural engineering and new inventions in agricultural machinery; rural economy, with its important phase of farm bookkeeping; agricultural industries; and, finally, the immense field of plant diseases. * * * Our ideal would be that every important invention, all original research, every result arrived at in the theory or practice of agriculture be reported in our bulletin, so that our readers may be sure that there is nothing new and really important in technical agriculture but is brought under their eye. * * * We have made considerable progress toward our ideal.

The report went on to show that in accordance with the authorization received from the last assembly the institute has, through the medium of the Governments, requested the collaboration of the most eminent authorities in the theory and practice of agriculture in every country, and this has caused an appreciable improvement in the work. Besides publishing its regular bulletin, the bureau of agricultural intelligence has given great attention to the organiza-

tion of an information service, which has already answered several hundred inquiries addressed it by the adhering Governments.

Agricultural meteorology has also received the diligent attention of this bureau, and in this work the institute has had the cordial cooperation of the international meteorological committee, which has drawn up, at the request of the institute, a plan for the organization of an international service of agricultural meteorology.

Finally, the president called the attention of the assembly to the importance of the work done by the bureau of economic and social institutions (agricultural cooperation, insurance, and credit), as instanced by the interest its publications have aroused in the United States in drawing attention to the European systems of rural cooperative finance. He said:

The institute is making useful propaganda, of which a most significant result will be seen in Rome in a few days' time. The wide circulation of the institute's bulletins in the United States has drawn the attention of that great country to agricultural cooperative credit. An official commission, appointed to study this question, will, during the session of the general assembly, visit Rome as its starting place, from whence it will proceed to those countries of Europe in which agricultural credit is most highly developed and best organized. The coming of this commission is one of the proofs of the practical utility of the institute.

2. FINANCIAL STATUS OF THE INSTITUTE.

In conformity with article 5 of the treaty of June 7, 1905, which established the institute, it rests with the assembly to fix the limits of the expenditure which may be incurred by the permanent committee until its next session, and to audit and approve the accounts of the institute. To enable the assembly to discharge this important duty a full report on the financial situation of the institute, along with the estimates of expenditures and receipts for 1913, was presented on behalf of the permanent committee by its reporter, M. A. Fialho, delegate of Brazil.

The income of the institute for 1911 was as follows:

	Francs.
Contribution of His Majesty the King of Italy	300,000.00
Quotas paid by the adhering Governments:	
	Francs.
First group (16 countries).....	384,000.00
Second group (4 countries).....	48,000.00
Third group (2 countries).....	12,000.00
Fourth group (13 countries).....	39,000.00
Fifth group (15 countries).....	22,500.00
	<hr/> 505,500.00
Interest.....	20,512.99
Sale of publications and advertisements.....	7,803.89
Miscellaneous.....	1,078.57
Drawn on accumulated reserve.....	52,434.52
	<hr/>
Total.....	887,329.97

The expenditures of the institute for 1911 were as follows:

	Francs.
Personal services.....	513,938.60
Care of building.....	19,842.08
Office expenses (including postage).....	61,411.35
Library.....	46,858.65
Printing.....	149,131.00
English and Italian editions of bulletins.....	52,417.92
Permanent equipment.....	29,996.73
Miscellaneous.....	13,733.64
	<hr/>
Total.....	887,329.97

The income of the institute for 1912 was as follows:

	Francs.
Contribution of His Majesty the King of Italy	300,000.00
Quotas paid by the adhering Governments:	
First group (16 countries, including United States).....	384,000.00
Second group (4 countries).....	48,000.00
Third group (2 countries).....	12,000.00
Fourth group (13 countries).....	39,000.00
Fifth group (15 countries).....	22,500.00
	<hr/>
Interest.....	505,500.00
Sale of publications and advertisements.....	15,500.69
Miscellaneous.....	63,274.46
Drawn on accumulated reserve.....	2,717.47
	<hr/>
Total.....	41,922.83
	<hr/>
Total.....	928,915.45

The expenditures of the institute for 1912 were as follows:

	Francs.
Personal services.....	526,863.51
Care of building.....	17,742.16
Office expenses (including postage).....	67,635.96
Library.....	40,000.00
Printing.....	126,710.51
Permanent equipment.....	13,000.00
Editions in English, Italian, German, Hungarian.....	101,089.59
Interest paid on reserve fund.....	15,465.69
Miscellaneous.....	20,408.03
	<hr/>
Total.....	928,915.45

The permanent committee submitted the estimated receipts and expenditures of the institute for 1913, as follows:

Income:		Francs.
Contribution of His Majesty the King of Italy		300,000.00
Quotas paid by the adhering countries—	Francs.	
First group (16 countries).....	384,000.00	
Second group (4 countries).....	48,000.00	
Third group (2 countries).....	12,000.00	
Fourth group (14 countries).....	42,000.00	
Fifth group (16 countries).....	24,000.00	
	<hr/>	510,000.00
Interest.....		14,035.00
Sale of publications and advertisements.....		64,273.56
Miscellaneous.....		1,000.00
Drawn on accumulated reserve.....		94,543.44
	<hr/>	
Total.....		983,852.00
	<hr/>	
Expenditures:		
Personal services.....		588,852.00
Care of building.....		16,800.00
Office expenses (including postage).....		85,750.00
Library.....		40,000.00
Printing, translating, etc.....		204,900.00
Permanent equipment.....		13,000.00
Interest paid on reserve fund.....		14,000.00
Miscellaneous.....		20,550.00
	<hr/>	
Total.....		983,852.00

The assembly was asked to approve these estimates and to vote a lump sum of 1,106,485 francs, for the expenses of the institute in 1914.

In accordance with the proposals submitted by the reporter, and to meet the requirements of the increasing work of the institute, the

assembly decided to ask the adhering Governments to increase their contributions to the maximum provided for under the treaty of June 7, 1905, such increase to begin in 1914. This will raise the contribution payable by the United States from \$4,800 to \$8,000.

The assembly approved the detailed statements of receipts and expenditures for 1911 and 1912, and the estimates for 1913, and voted the lump sum asked for the years 1914-15, to be expended at the discretion of the permanent committee.

3. STATUS AND DEVELOPMENT OF THE CROP-REPORTING AND AGRICULTURAL STATISTICAL WORK OF THE INSTITUTE.

As in previous years, this was the most important subject before the assembly. The discussions in the second commission under this head were based on the report submitted on behalf of the permanent committee by the delegate of Germany, Dr. Müller.

In this report Dr. Müller places in clear relief the great importance of the institute's international crop-reporting service and of the publication of the summary figures on crop conditions and yields in the form of the "single numerical statement" for all the countries supplying the required data. He points out that this is the principal function of the institute, and one which can only be performed by such an international body, created by the nations for this purpose under a special treaty. Speaking on this subject he says:

The crop-reporting work is an instrument of which the institute avails itself in order to accomplish the principal task intrusted to it, the solution of one of the most important economic problems of modern times, to wit, the equitable and most profitable distribution of the world's agricultural staples. * * * The institute was instructed to take up statistics and crop reporting and use them as an instrument in performing its great work of contributing toward the equitable formation of prices, toward assisting the producers to obtain their rightful influence on price formation, toward exercising a control on markets, and protecting the farmers against illegitimate and harmful price manipulation. * * * Such an international body as the institute is the essential requisite in the organization of a service of information and control on the production and trade in the staples of agriculture. * * * It has been an easy matter in the past to express the wish for an effective control, but in the absence of an international center the possibility of exercising such control did not exist. The International Institute of Agriculture has made this control possible.

In view of the facts he sets forth the reporter urges that the crop-reporting service be adequately provided with the means it requires to fully accomplish its important task.

He then reviews the progress made in the crop-reporting service since 1911. The total number of crop reports received from the adhering countries rose from 166 in 1910 to 246 in 1912. Since the last general assembly Portugal has organized a service of agricultural statistics; Serbia is replying partially to the questionnaires of the institute; Brazil has announced the organization of a statistical bureau and has supplied reports on coffee; Costa Rica now sends reports on cereals, sugar cane, and coffee; China has begun to supply statistical data for certain Provinces; Spain, Algeria, and Egypt have adopted the institute's mode of reporting on crop conditions, and this has also been done in part by Canada. Germany and Austria have altered the dates of their monthly crop reports in conformity with the institute's requirements. France, which reported the condition of crops only by departments, now gives a report for France as a whole. Chile has organized a section of agricultural statistics.

Germany has extended the preliminary estimates of harvest yield, made one month before the harvest, from Prussia to almost all the confederate States. Thus what was promised in 1910 and 1911 is in part an accomplished fact in 1912.

The report draws special attention to the important action taken by Russia toward re-forming her system of agricultural statistics with a view to the requirements of the institute. The following official communication to the institute is quoted:

The Imperial Government of Russia, deeming it its duty to contribute, as far as possible, to the efforts made by the International Institute of Agriculture to secure greater uniformity in agricultural statistics, has recently given a detailed examination to the question of the possibility of applying to the Russian system of agricultural statistics the numerical method of reporting crop conditions employed by the institute in conformity with the wish expressed by the general assembly in May, 1911.

In view of the special conditions of the country and of the present status of the Russian agricultural service the Russian Government considers that full compliance with the wishes of the institute can only be the result of a thorough reorganization of this service. The Russian Government feels justified in stating that this reform, which has become urgent in view of the importance which statistics have acquired in the economic and commercial relations between the several countries, has been decided on and will be carried out as promptly as possible. Until this reform has been effected the Russian Government has decided to take all possible steps, even those of a temporary nature, to supply the institute regularly and at the earliest date possible after the returns have been made with all information, including reports in percentage form on the condition of crops and estimates of probable yield, which are available in the different branches of the administration.

At present a numerical estimate of the condition of the crops is only made in Russia once a year, during the period of growth; the original figures as well as their translation into terms of a percentage of an average yield can be, and henceforth will be, communicated to the institute about August 15. This can not yet be done at an earlier date. The regular substitution of reports expressed in figures for the verbal reports now given must necessarily be delayed until the crop-reporting system is based on the new principles adopted in the scheme for the reorganization of the Russian service of agricultural statistics. But the Russian Government, desirous of complying as soon as possible with the requirements of the institute without waiting for the carrying out of the proposed reforms, will take the necessary steps to communicate to the institute, as a transitory measure, about June 15 and July 15 of each year the numerical reports on the condition of the crops and the probable yield in so far as these data can be based on information collected and collated by the several branches of the administration.

The reporter also quotes a statement made by the delegate of Russia to the permanent committee that this important decision on the part of the Russian Government was taken—

as the result of the propaganda journey made in Russia by Mr. Lubin, of the letters written by the president of the institute to the president of the council of ministers of Russia, and to the initiative taken by His Excellency M. Yermoloff, delegate of Russia to the general assembly of the institute.

The letter which Mr. Lubin addressed on this subject to the minister of finance of Russia, His Excellency M. Kokovtsoff, is given below.

In examining the work done by the institute in extending the crop-reporting service to grapes and wine, silk, tobacco, sugar beets and sugar cane, flax, and coffee, the reporter called the attention of the assembly to various improvements which the governments should introduce into their services for these staples in order to comply with the requirements of the institute, and called upon the United States to organize crop reports on sugar beets so as to supply, at the latest in October, an estimate of the yield.

An important work accomplished by the statistical bureau in 1912 was the publication of the first International Yearbook of Agricultural Statistics. This is a collection of tables, systematically arranged, showing for a decade, and for the countries adhering to the institute, the area and production of the principal staples and the actual number of head of live stock. It also gives the area and population of the countries dealt with and contains tables showing the agricultural distribution of the land in these countries. To facilitate comparisons, all data on area and production have been reduced to the metric system. The reporter submitted to the assembly proposals for enlarging the scope and increasing the value of this year-book.

The last point considered in this report was the steps taken by the institute to carry out the wish expressed by the general assembly in 1911, that the governments be invited to study the question of unifying their present systems of crop reporting, so as to secure the comparability required for a perfected international information service. The assembly in 1911 expressed the wish that this question should be submitted by the permanent committee to the International Institute of Statistics, with a view to obtaining its opinion. So far the permanent committee has only carried out these instructions in part, having submitted to the International Institute of Statistics in September, 1911, a detailed report on international statistics of crop conditions. A special committee was then appointed by the International Institute of Statistics for the further study of this question, which will again be brought up at the next congress, to be held in Vienna in September, 1913, when a further report on the outstanding question of the unification of statistics on areas under cultivation and on yields will be presented by the International Institute of Agriculture.

The debate on Dr. Müller's report in the second commission showed that the preeminent importance of the crop-reporting service was fully recognized by the delegates, and the following resolutions were unanimously adopted, and subsequently ratified by the general assembly at its plenary meeting on May 10:

1. The general assembly, in accordance with the ideas which led to the foundation of the International Institute of Agriculture, once more invites the Governments of the adhering countries to make all possible efforts to facilitate to the institute the accomplishment of one of its principal tasks, that of organizing a regular international service of prompt, reliable, and complete information on plant and animal production, and on the consumption and trade in agricultural staples and their prices.

The general assembly therefore instructs the permanent committee to take the requisite budgetary steps to insure as thoroughly as possible the future development of the general service of information on the production, consumption, trade in, and prices of agricultural staples.

2. The general assembly, while taking cognizance of the improvements which a number of the adhering Governments have introduced or purpose introducing in their agricultural statistical services, notes that in order to enable the institute to carry on a rapid, complete, and effective crop-reporting service the adhering Governments must be called upon to make yet further efforts.

The general assembly therefore instructs the permanent committee to ascertain for each product the improvements which the several Governments should be asked to introduce into their statistical services so as to place the international crop-reporting service on a firm foundation; these studies shall be transmitted to each Government with the request that it take the requisite steps to comply with the needs of the institute's service.

3. The general assembly, having taken cognizance with great satisfaction of the publication of the first volume of the International Yearbook of Agricultural Statistics,

and approving the intentions of the permanent committee in the matter of perfecting this publication, requests the Governments of the adhering countries to collaborate effectively with the institute to the end that this yearbook may become the most complete comparative work on the production, trade, consumption, and prices of agricultural products.

4. The general assembly, while thanking the International Institute of Statistics for the favorable reception and thorough study it has made of the proposals submitted to it for the unification of the methods of reporting on crop conditions, requests it to give its views also on questions relating to the unification of statistics on areas under cultivation, and on estimates and preliminary and final statements of harvest yields, so as to give its deliberate opinion on these points at its next meeting, to be held at Vienna in the autumn of this year.

The general assembly instructs the permanent committee to draw up, as soon as possible, a statement of the reasons for unification and a plan of organization for this branch of agricultural statistics so that the International Institute of Statistics may be informed in due time of the desiderata of the International Institute of Agriculture with a view to pronouncing on them this year.

5. The general assembly requests the adhering Governments to state: (a) The methods followed by field agents in securing the data for reports on crop conditions; (b) whether the field agents merely give their opinion on the appearance of the growing crops at the time of making the report (as, for instance, in the form of verbal descriptions, such as "good," "very good," "pretty good," etc.) or whether they express their opinion in terms of estimated future yield per hectare; (c) the reasons which have determined the adoption of the method employed and, if needful, the reasons which would prevent them from adopting the method favored by the institute.

6. The general assembly invites the permanent committee to provide that in future a clear distinction be drawn in the institute's crop reports between estimates of yield made before the harvest and those returns made after the harvest.

4. STATUS AND DEVELOPMENT OF THE INSTITUTE'S SERVICE ON COMMERCIAL STATISTICS (EXPORTS, IMPORTS, STOCKS, AND PRICES).

The delegate of Russia, M. Zabiello, on behalf of the permanent committee, submitted a report on this subject showing the steps taken by the institute to carry out the decisions arrived at by the general assembly in 1911. In accordance with these decisions the institute now publishes in its statistical bulletin a section dealing with exports, imports, stocks, and prices of the five cereal crops and cotton. This work is done with special reference to the needs of farmers, and statistics on the production of the staples and on the trade in them are published side by side in order that farmers may have before them in convenient form "all the factors which go to determine the status of the world's markets." In the course of the debate on this report before the second commission Mr. Lubin read a paper in which he urged that an effort should be made to include in the institute's price bulletin, side by side with the quotations for the ruling prices of the staples on the world's market centers, the principal factors which go to make up those prices, such as the price paid to the farmer, cost of transportation by rail and sea, insurance, broker's commission, etc. He called attention to the influence of the cost of carriage not only on the price of the product at the world's market center, but also on the home price, and the consequent need of giving in the bulletin the cost of charters in order to make the price quotations intelligible and helpful to the reader. He indicated, moreover, that the institute might perform valuable work toward lowering the cost of charters by supplying information required by shipping companies in order to insure the regular succession of outgoing and return cargoes. With reference to this paper (given below) the second commission decided that the statistical bureau should make a thorough study of all the factors which go to deter-

mine the price of the staples on the several market centers, as preliminary to giving these factors in the price bulletin when sufficiently prepared to do so effectively.

The following resolutions were adopted by the second commission and approved by the general assembly:

1. The general assembly instructs the permanent committee to continue the monthly publication of information on imports, exports, visible stocks, and prices for the five cereals (wheat, rye, oats, barley, and maize) and for cotton, as now supplied by the Governments to the institute, while introducing into this publication those modifications which may be recognized as necessary for perfecting this service.

The institute will communicate with the several Governments to obtain their consent to utilize for its reports on visible stocks and prices, in default of official data, information coming from private sources, in conformity with article 21 of the by-laws.

2. The institute is instructed to continue its study on the trade in cereals and the customhouse statistics of the same with a view to submitting proposals to the next general assembly for the improvement of the statistics on imports and exports in the matter of uniform classification and comparability of figures. The proposals to be submitted will aim more especially at uniformity in the definitions of "general" trade, "special" trade, and goods in transit (bonded warehouse and temporary admission), and to the classification of goods according to country of origin and ultimate destination.

The adhering Governments are requested to supply the institute with the data it requires on a uniform plan drawn up by the permanent committee concerning the organization of customhouse statistics in their respective countries and the mode of securing the returns.

The data supplied by the Governments will be used as a basis for the study of customhouse statistics which the institute is to make, in which it will also take into account the decisions arrived at by the congresses on customhouse statistics.

3. The general assembly once more calls on the adhering Governments to report, even if it be only experimentally, on invisible stocks (residue of the last harvest still in farmers' hands) for the five cereals above mentioned once a year at the date of the first numerical estimate of probable harvest yield; that is to say, one month before the harvest. The Governments are requested to communicate the results of this inquiry to the institute, which will only publish the same after obtaining the consent of the respective Governments.

4. The general assembly also reiterates its request to the adhering Governments to improve their statistics of information on visible stocks for the five aforementioned cereals and to organize a monthly service for this purpose, if they have not already done so.

5. The institute is instructed to pursue the study it has undertaken on the question of prices, taking as its basis for this work a detailed study on the organization of the principal markets, their commercial usages, and the factors which go to make up the price. The institute, acting under article 21 of the by-laws, and with the consent of the Governments concerned, shall address itself for this purpose to institutions of a nonofficial character and even to private experts, who will supply the information required in the form of monographs on the organization of each of the several markets.

5. PROPOSAL FOR AN INTERNATIONAL SERVICE OF STATISTICS OF LIVE STOCK.

The delegate of Austria, Chev. de Pozzi, submitted a report on this subject on behalf of the permanent committee in which he pointed out that the crisis in the meat trade, which has made itself felt for some time past in Europe, and is already affecting the trans-oceanic countries, has made it a matter of great importance to obtain the main basis for an inquiry into the cause of the decline in the supply as compared to the demand, a basis which at present is lacking, as the number of head of live stock available for the world's markets is unknown owing to the defective organization of the statistics of live stock in the several countries. For these reasons the institute considers a reform in these statistics a matter of urgent necessity.

This report was the subject of an animated debate in the second commission. Some delegates favored the adoption of a uniform date for the census of live stock, while others considered that a certain latitude should be left to the Governments in selecting the date most convenient to each, or which would coincide with the period at which the number of head of live stock is at its maximum in the several countries. The second commission finally decided on a statement (No. 3 of the subjoined resolutions) which satisfies both requirements, calling for the census to be made within a lapse of time brief enough to insure practical uniformity, but at a date to be determined by each Government, i. e., within the period of four months comprised between December and April. This proposal met with unanimous consent.

The resolutions submitted by the second commission, and unanimously adopted by the general assembly at its plenary meeting on Saturday, May 10, were the following:

1. The general assembly considers that it is absolutely necessary in both national and international interests that each country should possess statistics of live stock. It calls on those countries which do not possess such a statistical service, or in which it is inadequately organized, to comply with the requirements of an international information service to undertake, as rapidly as possible, the steps necessary to organize such statistical service in conformity with the wishes expressed by the institute.

2. The general assembly is of the opinion that statistics of live stock should state each year, as far as possible, the number of heads of each kind and for each of the categories mentioned under resolution No. 4. If the organization of so detailed a system of statistics should not seem possible at present for certain countries, the general assembly is of opinion that the statistics of live stock should include for each of these countries, beginning in 1920, a decennial census and a more summary annual report.

3. The general assembly is of the opinion that the adhering States should adopt for their annual statistical reports and, when needful, for their periodic census, a date comprised within the months from December to April, and should publish at least the preliminary returns within three months of gathering them.

4. The general assembly is of the opinion that the adhering countries should adopt a classification which, while suited to their own requirements, would allow of abstracting statistical data under the following heads:

(a) Horses: 1, foals; 2, stallions for reproduction; 3, horses not comprised in the above categories.

(b) Cattle: 1, animals under 1 year old; 2, young oxen, bulls, and heifers; 3, cows; 4, bulls; 5, oxen.

(c) Sheep: 1, lambs under 1 year old; 2, rams over 1 year old; 3, ewes over 1 year old; 4, sheep over 1 year old.

(d) Pigs: 1, young pigs; 2, pigs being fattened; 3, sows; 4, hogs.

(e) Goats: Total number.

5. The general assembly instructs the permanent committee to submit to the next general assembly a detailed report on the status of the statistics of live stock in the several countries.

6. The general assembly expresses the opinion that the statistics of live stock should be supplemented by the publication of information as detailed as possible on the consumption and trade in meat and instructs the permanent committee to study this question and submit a report on same to its next session.

6. PROPOSAL FOR AN INTERNATIONAL SERVICE OF STATISTICS OF FERTILIZERS.

The permanent committee was instructed by the general assembly in 1911 to make a study of this subject on the motion of M. Aldunate, delegate of Chile. Accordingly a report was drawn up on behalf of the permanent committee by M. Pioda, delegate of Switzerland, in which he pointed out the value of the work which the institute could accomplish by an inquiry of this nature, which could not be success-

fully carried out by any single country. In the course of the debate on this report before the third commission the wish was expressed by several delegates that a similar study and inquiry should be made on the subject of the production and trade in concentrated feeds for cattle. The following resolutions were adopted by the third commission and approved by the general assembly:

1. The general assembly instructs the bureau of agricultural intelligence to publish in one of the spring numbers of its bulletin, and again in one of the autumn numbers for each year, a report giving all official and unofficial information which it has been able to secure on the production, consumption, and trade in agricultural fertilizers, and their effects in promoting the progress of the farming industry.

2. The bureau of agricultural statistics shall publish in the Yearbook of Agricultural Statistics the data it has been able to collect during the year on official and other statistics on fertilizers (production, consumption, and trade in same).

3. The permanent committee shall study what steps can be suggested to the adhering Governments, with a view to organizing, completing and rendering uniform the statistics on production, consumption, and trade in agricultural fertilizers.

7. STATISTICS OF AGRICULTURAL COOPERATION.

In his report under this head the delegate of Austria, M. de Pozzi, stated that in accordance with the decisions of the general assembly in 1911, the president of the institute invited all the adhering Governments to state what action they were prepared to take toward organizing international statistics of agricultural cooperation. Fourteen Governments have replied. Austria, Spain, France, Italy, and Belgium state that they are now organizing or revising their systems of statistics of cooperation and will take into consideration the requirements of the institute in this matter. Holland, Switzerland, Denmark, Germany, Japan, and Great Britain state that they are already in a position to supply the institute with most of the information it requires. Sweden, Mexico, and the United States state that they are not yet in a position to give the information asked for. The reporter stated:

It is gratifying to note that the Governments of several countries of great importance for the development of agricultural cooperation have willingly fallen in with the ideas of the institute for the organization of an international statistical service for agricultural cooperation.

The following resolutions were unanimously adopted by the fourth commission, before which the report came up for consideration, and by the general assembly:

1. The general assembly notes with satisfaction the results so far attained by the inquiry made by the permanent committee on the organization of an international service of statistics of agricultural cooperation on the basis of the decisions of the third general assembly, in so far as these are not incompatible with the legislation of the several adhering countries.

2. It instructs the permanent committee to continue this inquiry and to begin, as soon as possible, the regular publication of comparative statistical data on agricultural cooperation in the several countries.

3. It instructs the permanent committee to submit to the next session of the general assembly a report on the further results obtained by its labors in this field.

8. STATISTICS OF CROP INSURANCE AGAINST DAMAGE BY HAIL.

M. Bolle, delegate of Belgium, submitted, on behalf of the permanent committee, a detailed report on this subject. In accordance with the decisions of the general assembly in 1911 the adhering

countries had been invited to reply to a questionnaire sent out by the institute on the statistics of hail. Some Governments merely acknowledged receipt of this questionnaire without supplying the information asked for on the ground that hailstorms are not of importance in their countries, while others returned it duly filled in and forwarded the text of the laws enacted in their countries on hail insurance. These replies clearly show the great importance of insurance against hail and the utility of spreading, through the institute's publications, a knowledge of the measures taken in the several countries to develop this form of insurance.

The following resolutions were adopted:

1. In view of the valuable services rendered to agriculture by insurance against hail, the general assembly calls on the adhering Governments whose crops are threatened by this scourge to communicate regularly to the institute the legislative, administrative, or private measures taken within their jurisdiction to promote, encourage, develop, and control insurance against hail.

2. The general assembly instructs the permanent committee to spread a knowledge of these measures by means of the monthly bulletin of the bureau of economic and social intelligence.

9. STATUS OF THE INSTITUTE'S WORK IN PROMOTING AN INTERNATIONAL SERVICE OF AGRICULTURAL METEOROLOGY.

The report on this head submitted on behalf of the permanent committee by M. Louis Dop, delegate of France, gives the history of the steps so far taken by the institute in this matter, as follows:

The general assembly in 1911 examined a report on the need for the organization of an international service of agricultural meteorology and unanimously decided to forward the same officially to the international meteorological committee for action. As the result of this step the international meteorological committee met in Paris in September, 1912, and again in Rome in April, 1913, and appointed in accordance with the proposal made by the institute a permanent commission on agricultural meteorology, consisting of M. Angot, president of the permanent commission; M. Shaw, president of the international meteorological committee; Messrs. Bornstein and Hergesell for Germany, Brounoff for Russia, Palazzo for Italy, Dop for France, Ryder for Denmark, and Stupart for Canada. The personnel of this commission is to be completed by further appointments, each Government sending to the president of the permanent commission of meteorology (M. Angot) the names of the persons it wishes to see placed on said commission to represent its country. The commission is to draw up a plan for an international service of agricultural meteorology.

Thus the proposals formulated by the International Institute of Agriculture at the general assembly of 1911 have been successfully carried out. The international meteorological committee has accepted them and requested the cooperation of the institute in this work of organizing an international service of agricultural meteorology.

The reporter then submitted data showing that the economic loss to agriculture due to meteorological causes amounts, for Europe alone, to about \$1,000,000,000 a year. He stated that the aim of an agricultural meteorological service should be to render an economic service to the farmers by assisting them to reduce the losses due to atmospheric causes, and that if this is to be done it is essential that

the permanent commission of agricultural meteorology include among its members not only meteorologists but also botanists, agronomists, phytopathologists, and agricultural geologists.

After the conclusions arrived at in the report had been carefully gone into by the third commission, the following resolutions were unanimously adopted by it and approved by the general assembly:

1. The general assembly resolves to transmit to the international meteorological committee, through the president of the institute, its thanks for the favorable reception given by the committee to the proposals formulated by the general assembly in 1911 on the question of agricultural meteorology, and more especially for the appointment of the permanent commission on agricultural meteorology.

2. M. Dop's report (1913), approved by the general assembly, will be forwarded officially by the institute to the president of the permanent commission of agricultural meteorology, so as to serve as the basis for the labors of that commission.

3. The general assembly is of the opinion that the permanent commission on agricultural meteorology should consist of meteorologists, agronomists, botanists, phytopathologists, and agrogeologists.

4. The general assembly expresses the wish that the permanent commission on agricultural meteorology examine the following questions:

- (1) Statistics of maximum losses caused by storms.
- (2) Importance of daily weather reports in drawing up statistics of favorable conditions.
- (3) Study of factors which contribute to increase crop yield; tendency toward maximum yield.
- (4) Study of means for spreading a general knowledge of meteorology amongst farmers.
- (5) Study of relations between the yield of a crop and the several atmospheric factors.
- (6) The standardizing of a good agricultural year from the atmospheric standpoint.
- (7) The drawing up of a scheme of annotation or a percentage scale indicating a good year or an average year.
- (8) Study of the factors which go to make a good year.
- (9) Study of the several factors which contribute to the production of a good crop:
 - (a) Time required to insure a good crop;
 - (b) hours of sunshine required for a good crop;
 - (c) amount of heat required for a good crop;
 - (d) amount of moisture required for a good crop;
 - (e) rainfall required for a good crop.
- (10) The preparation of questionnaires to be sent to farmers.

10. PROPOSAL FOR AN INTERNATIONAL AGREEMENT FOR THE CONTROL OF PLANT DISEASES.

The report on this head was submitted on behalf of the permanent committee by Prof. Cuboni, delegate of Ethiopia. The report sets forth the action already taken by the institute to promote international action for the control of plant diseases. In 1909 the general assembly instructed the institute to publish a monograph showing the present status of the service for the control of plant diseases in each of the adhering countries, and to take active steps to induce those countries which had not such a service to organize it. This preliminary work was accomplished by the institute, which submitted to the general assembly in 1911 a monograph of 233 pages entitled "Present Organization of the Services for the Control of Plant Diseases and Insect Pests in the Different Countries," when a resolution was approved, as follows:

The general assembly instructs the permanent committee of the International Institute of Agriculture to draw up a report calling the attention of the Governments to the need of assembling an international commission of plant pathology.

Accordingly the institute drew up such a report, setting forth not only the technical but also the economic importance of convening an international commission of plant pathology to draft measures to be

taken for the control of plant diseases which might serve as a basis on which the institute could draw up proposals to be submitted to the several Governments for an international agreement in this field. The French Government then undertook to formally invite the Governments to send delegates to such a conference which was to have been held in Rome in April, 1913, so that its conclusions might have been submitted for action to the general assembly of the institute. The inadequate notice given, however, made it necessary to postpone the meeting of the international commission until a later date, and in the absence of its proposals the permanent committee submitted the following resolutions for the general assembly to act on:

The general assembly recommends that the Governments adhering to the institute:

(1) Organize, if they have not already done so, a Government service of phytopathological inspection and control, especially for nurseries and establishments trading in living plants intended for reproduction.

(2) Enact that all consignments of plants intended for reproduction be accompanied by a certificate similar to that required by the Berne phyloxera convention, to be delivered by the Government inspector, certifying that said plant comes from a nursery subject to his control and free from dangerous cryptogamic or entomological disease.

(3) In case one or more States disagree as to whether a given disease should be described as dangerous, or when there is grave reason to suspect the presence of new and dangerous disease liable to be spread by plants not intended for reproduction, the Governments concerned should convene a commission of specialists of their respective countries to study and propose the most practical mode of preventing the spread of the disease with the smallest possible loss to the trade of the countries concerned.

(4) The assembly considers that an international agreement is indispensable for the protection of agriculture against plant diseases. Such an agreement should be based on the principles outlined in paragraphs 1 to 3 of these resolutions and should set forth: (a) The measures and methods of inspection and control; (b) a list of diseases recognized as dangerous; (c) what products should be subject to control; (d) the blanks and form of certificate; (e) the mode of arbitration to be resorted to in disputed cases.

(5) The assembly considers that the convening of an international commission of specialists, as proposed by the French Government, would greatly facilitate by its preparatory labors the conclusion of an agreement by plenipotentiaries.

The assembly expresses the wish that said commission convene as soon as possible, and that this may be followed at once by the conclusion of an agreement.

(6) The assembly is of opinion that whenever the General Assembly of the International Institute of Agriculture convenes, Government specialists on plant pathology should meet in a special commission to (a) come to an understanding on common studies bearing on plant diseases; (b) to keep in touch with the results obtained by the enforcement of the international agreement, to communicate these results to one another, and to suggest, if need be, amendments to be introduced therein.

These proposals were the subject of an animated debate in the third commission, which concluded that the question had not yet been sufficiently studied to authorize the assembly to lay down the basis for an international agreement between the several Governments, and deemed it desirable that an international commission of Government experts should be convened to study the question thoroughly. This commission should include, besides plant pathologists, practical men capable of appreciating the economic and political bearing of any measures to be proposed. Careful preliminary study of the questions to be brought before said commission should be made in each country, the International Institute of Agriculture placing the requisite material for such study at the service of the several Governments. This international commission should convene at a date not later than May, 1914. The third commission also expressed itself strongly in favor of a meeting of phytopathologists from the several countries being held on the occasion of each session of the general

assembly, as in the present formative stage of this science its success largely depends on careful study of the several problems along parallel lines in the different countries and on the frequent exchange of views between the specialists engaged in these studies.

The following resolutions were drawn up by the third commission and unanimously adopted by the general assembly at its plenary meeting:

1. The general assembly recommends that the Governments adhering to the institute organize, if they have not already, a Government service of phytopathology.

2. The general assembly, recognizing the need for an international agreement on the means of controlling plant diseases, deems it essential that an international commission of experts be convened and expresses the wish that the French Government continue the initiative it took in this matter by bringing about the holding of such an international commission as soon as possible and not later than May, 1914.

3. The general assembly is of opinion that on the occasion of each session of the general assembly of the International Institute of Agriculture experts of the adhering Governments should meet in a special commission to come to a mutual understanding on their common researches and studies on plant diseases.

4. The general assembly calls on the adhering Governments to initiate the study of the several questions to be brought before the international commission of phytopathology on the basis of data to be supplied by the International Institute of Agriculture.

The third commission also considered a paper submitted by the director of the Imperial Experiment Station of St. Petersburg, on the adulteration of seed, in which the director says:

The work of the seed-testing stations in the several countries is to a great extent nullified by the fact that they do not work on uniform lines, and that new cases of seed adulteration remain for a long time unknown, so that stations can not take the requisite measures for the protection of agriculture.

In consideration of this report the general assembly approved the following resolution:

The general assembly, having taken note of the communication by M. Jaczewski, on the subject of the publication of the results of seed and grain tests, and recognizing the practical importance of rapid and widespread information on this subject, instructs the permanent committee to study the question of inserting in the institute's monthly bulletin data on the adulteration of grain and seeds, which data should be supplied by the Government seed-testing stations. The general assembly considers that the permanent committee should advise the Governments adhering to the institute to require the seed-testing stations to forward such data to the institute.

10. PROTECTION OF USEFUL BIRDS.

The permanent committee again submitted, as in former years, a report to the general assembly showing the steps taken by the adhering Governments since the session in 1911 for the protection of useful birds. The reporter, M. de Miklos, delegate of Hungary, was able to state that the propaganda carried on by the institute in this field had borne good fruit as five more countries had enacted legislation on the matter since 1911. The following resolution was submitted and unanimously adopted by the general assembly:

1. The general assembly notes with satisfaction that several Governments have recognized during the past two years the need of taking measures for the protection of useful birds, thus proving the efficacy of the action of the International Institute of Agriculture in this field.

2. In view of the fact that strenuous efforts must still be made to bring about, in accordance with the wish of the general assembly in 1911, universal cooperation between the several countries for the protection of useful birds, the general assembly

instructs the permanent committee to continue its work of propaganda with the adhering Governments and to present a report to the next session of the assembly on this question.

11. DRY FARMING.

Following up the action taken by the institute on this head in 1911, the permanent committee submitted a detailed report by M. de Miklos, delegate of Hungary, showing that, as requested by the institute, experiments in dry farming are being carried out under Government control in arid regions in several countries. The following resolution was adopted by the third commission and approved by the general assembly:

The general assembly, noting the extension of dry farming in several countries, and the results obtained by these methods, as shown by the proceedings of the Seventh Dry Farming Congress held in 1912 at Lethbridge (Canada), instructs the permanent committee to continue its work of documentation on this question, and again invites the Governments to communicate to the institute the results of the experiments made in this branch of farming.

Finally, the delegate of Austria, Chev. de Pozzi, on behalf of the Austrian delegation, called the attention of the assembly to the importance of institutions for farm bookkeeping, as systematic studies on these lines afford a much more accurate idea of the real status of agriculture in a country than can be otherwise obtained. On his motion the following resolution was adopted by the general assembly:

The general assembly instructs the permanent committee to draw up for the next general assembly a report on the institutions existing in some countries for farm bookkeeping, with a view to extending these institutions to as many countries as possible in order that the institute may, in time, be able to utilize the data secured by such institutions for its statistical and economic studies.

The first commission was called upon to fix the date for the next session of the general assembly in accordance with article 4 of the treaty. A proposal to hold the next session in 1916 was made, but the general consensus of opinion in the commission was that the Governments require to keep in close touch with the work of the institute, and that the interval between the sessions of the assembly should not exceed two years.

It was therefore decided by 28 votes against 4 that the next session shall be held in May, 1915. This date was unanimously approved by the assembly at its plenary meeting when the following resolutions brought in by the first commission, were passed:

1. The general assembly, having taken cognizance of the administrative report submitted by the president of the International Institute of Agriculture signifies its approval of the same, and addresses its congratulations and thanks to the president, the members of the permanent committee, and the staff of the institute.

2. The general assembly, renewing the wish expressed in 1911, requests the permanent committee to place in the hands of the Governments of the adhering States the reports on questions to come before the assembly at least two months before it convenes. It also expresses the wish that the several Government bureaus facilitate the work of the institute by always forwarding, at the earliest moment possible, the information which they may be asked to supply.

3. The general assembly instructs the permanent committee to study the question of preparing a dictionary of agricultural terms.

4. The next session of the general assembly will be held in May, 1915.

5. The general assembly calls on the Governments of the adhering States to increase their annual quota of subscription to the institute to the maximum provided for under article 10 of the treaty of June 7, 1905, the increased contribution to begin in 1914.

It approves the statement of receipts and expenditures for the years 1911-12 and takes cognizance of the budget for 1913 approved by the permanent committee. It votes a lump sum of 1,106,485 lire for the expenses of the institute in 1914, and votes for the expenses of 1915 any surplus which may be over from 1914 and all the receipts of the institute during that year.

6. Mindful of the august initiative to which the existence of the International Institute of Agriculture is due, the general assembly requests the president of the institute to forward to His Majesty the King of Italy the expression of its respectful homage and profound gratitude.

The session of the general assembly closed on Monday, May 12, 1913, in the presence of the members of the American commission for the investigation of the European systems of rural cooperative finance, then in Rome.

ANNUAL REPORT FOR 1912-13 OF THE PERMANENT DELEGATE OF THE UNITED STATES.

INTERNATIONAL INSTITUTE OF AGRICULTURE,
Rome, Italy, August 28, 1913.

HON. WILLIAM J. BRYAN,
Secretary of State, Washington, D. C.

SIR: I have the honor to hand you herewith, in triplicate, my report on the work of the International Institute of Agriculture for the year 1912-13; also copy of letters to the Secretary of Agriculture and the Secretary of Commerce, and three copies of Senate Document No. 123.

As part of the ground to be gone over is covered by the report of your delegation to the general assembly (May, 1913) I will confine my remarks mainly to commenting on matters touched upon therein. I am sending a copy of this report to Dr. Alfred C. True, chairman of that delegation, so as to constitute it an addenda to the general assembly report.

My report deals with the following subjects:

1. The crop-reporting service of the institute.
2. The treaty of 1905 and the United States quota; expansion of the institute's services.
3. The Commercial Bulletin and the factors in price formation.
4. Reports on cotton stocks on hand.
5. Cooperative rural credit.
6. The institute's publications, how they should be distributed.

1. THE CROP-REPORTING SERVICE OF THE INSTITUTE.

The importance of official and authoritative international crop-reporting is now generally recognized. One by one the nations are reorganizing and unifying their systems in conformity with the wishes of the institute. The last important nation to do this was Russia. In an official communication (October, 1912) the Russian Government made the following announcement to the institute:

The Imperial Government of Russia, deeming it its duty to contribute to the efforts made by the International Institute of Agriculture to secure greater uniformity in agricultural statistics * * * has decided to take all possible steps to supply the institute regularly and at the earliest possible date with all information on the condition of the crops and estimates of probable yield. * * * The Russian Government * * * will take the necessary steps to communicate to the institute, about June 15 and July 15 of each year, the numerical reports on the condition of the crops and the probable yield.

As a result of this decision the Russian Government is now regularly sending its data to the institute.

The monthly crop reports of the institute now exercise a decisive influence on price formation for the staples of agriculture, as evidenced by the serious consideration given them by the press of the world.

Speaking of this branch of the institute's work, Document No. 720 of the German Reichstag, Thirteenth Legislature, first session, 1912-13, says:

The main purpose of the institute is to promote the equitable formation of prices for the staples of agriculture. This only can be done by securing authentic and authoritative information on the production and trade in the staples, so as to use it as a means of neutralizing false or inadequate or biased information circulated in market centers. The institute, by securing and compiling this information, is solving one of the most important and most difficult of economic problems.

2. TREATY OF 1905 AND THE UNITED STATES' QUOTA—EXPANSION OF THE INSTITUTE'S SERVICES.

From time to time adhering nations requested the institute to extend its reports to certain further products; for instance, California, through the Department of Agriculture, requested that fruits and nuts be reported on; Germany and Russia asked for oleaginous seeds; Austria, Germany, and Argentina that live stock and meat be added; Chile and Switzerland that reports be made on the production and consumption of commercial fertilizers.

To meet the need for the extension of the service the general assembly, at its May session (1913), decided that the Governments be asked to raise their quota of contribution to the institute to the amount stipulated in the treaty of June, 1905, the sixth and seventh lines of article 10 of which read:

As a temporary provision the assessment for the first two years shall not exceed 1,500 francs per unit.

After which period of two years the quota was to be 2,500 francs per unit. The institute began its service in 1908, therefore this increased contribution was subject to call in 1910. At the start, however, the services involved a lesser expenditure than the income; indeed, it was possible during the first two years to accumulate a reserve, which has since been applied to meet the cost of the gradually increasing service. Now, that the additional work referred to above, is being undertaken at the request of the nations, and to meet the increased cost entailed by the normal expansion of its present services, the institute has decided to call in the full amount due under the treaty referred to above, which should be budgeted for by the adhering Governments in their estimates for 1914. The quota of the United States at the preliminary rate of 1,500 francs a unit amounted to \$4,800; at the rate of 2,500 francs a unit provided for by the treaty, it will now amount to \$8,000.

3. THE COMMERCIAL BULLETIN AND THE FACTORS IN PRICE FORMATION.

The institute is now supplementing its crop-reporting service by the publication of its Commercial Bulletin, giving, for the staples of agriculture, statistics of imports, exports, and stocks and the ruling prices on the world's market centers.

The publication of the ruling prices was deemed important as a means of indicating the comparable relation and bearing between the prices at the world's exporting and purchasing centers and the local prices.

In outlining the program for this work there was some considerable discussion as to the mode of presenting these prices. It was shown that the mere statement of the ruling prices was insufficient. For instance, in the institute's Commercial Bulletin of November 22, 1912, the prices for wheat were given as follows: Antwerp, 20.42; Paris, 27.70; Liverpool, 20.27; Budapest, 25.20; Winnipeg, 15.04; Chicago, 16.09; Minneapolis, 15.26; and Buenos Aires, 17.05.

Clearly this information would be of little use to the farmer; to be of value the principal factors shaping the price on the market centers should be given. These are (1) the price paid to the farmer, (2) custom's duty, (3) brokerage, (4) insurance, and (5) cost of transportation. These factors when summed up for any given market should give a total equal to the ruling price at the world's purchasing center. By supplying this information along with the ruling prices in the world's market centers the institute would enable producers and consumers anywhere to judge of the equity in the relation between the ruling world's price and the price in a given locality. They would thus be enabled to detect any cause operating adversely on the formation of prices. In other words, the general public would be given that kind of information which is now usually at the command of large buyers. The general diffusion of information of this character would meet the standard demanded by President Wilson in his book *The New Freedom*, in which he points out the need for throwing the light of publicity on economic matters which concern the people.

Let me illustrate the importance of this information by taking up one of the factors, the cost of transportation. There are, perhaps, not many producers who realize the fact that an increase in the cost of ocean carriage for a staple means a decrease not only in the price for the quantity exported but likewise a decrease in the home price for the entire production, for as the price of the staples is quoted in the bourses and exchanges the home price and the export price are the same. Now, say the production of wheat is 600,000,000 bushels, of which 200,000,000 are exported. A 1-cent rise in the cost of ocean carriage would therefore mean a loss to the producers of 1 cent on 600,000,000 bushels, or \$6,000,000. A 1-cent decrease in the cost of ocean carriage would mean an increase in the home price of 1 cent a bushel on the 600,000,000 bushels, or an increase of \$6,000,000.

The importance of a general and widespread knowledge of the cost of ocean carriage thus becomes obvious. I therefore offered a proposal in the permanent committee that the institute publish this information in its Commercial Bulletin. (See addenda to the general assembly report.) This proposal was at first rejected on the ground that the data desired would have to be obtained from unofficial sources. Subsequently, however, it was pointed out that the Governments could obtain this data from the unofficial sources and render it official by handing it to the institute. The permanent committee then decided that as an initial step toward this end its statistical bureau should take the matter up in a preliminary way for study and present its findings to the institute. I would respectfully suggest that the United States Government give the institute all assistance possible toward placing this service on a working basis. Please see inclosed copy of a letter on this subject addressed to the Secretary of Commerce.

4. REPORTS ON COTTON STOCKS ON HAND.

The question of the world's data on cotton stocks as a powerful factor in determining the price of cotton is another matter which I believe will merit your attention.

Quite a number of the delegates to the American Commission on Rural Credits which visited Europe this summer were from the southern States. They started their investigations from the institute in Rome, and expressed the opinion that the institute could be of material service to the cotton interests if it were to publish, in addition to the official data on the production of cotton now given in its crop-reporting bulletin, reports on cotton stocks on hand. Later on representatives of the cotton States, prominent amongst whom Harvie Jordan, of Atlanta, Ga., and Clarence Ousley and Col. Williams, of Texas, investigated the conditions of the cotton market in Egypt and were confirmed in their views as to the vital importance of obtaining these data on stocks on hand. In June they attended the cotton congress held at The Hague, and submitted the idea that the institute should be urged to supply all concerned with official data on this head. This proposal seemed to be favorably regarded by the other members of the congress, and it was decided that it should be brought for action before the International Cotton Federation at its next annual meeting.

If the institute is to do this work, it must, of course, obtain the required data from the Governments so as to render the information official, and I should be informed whether you can arrange to have the Department of Agriculture or the Department of Commerce secure the data for the United States and transmit the same officially to the institute. Meantime I purpose taking the matter up with the British authorities, and shall address Sir Charles Macara, president of the International Cotton Federation, on the subject.

5. COOPERATIVE RURAL CREDIT.

A notable feature of the work during the past year has been the active and powerful cooperation of the institute in the preparations for the investigation undertaken by the United States and American commission into the European systems of rural cooperative credit. The permanent committee delegates for the countries visited by the commission personally took up with their Governments the arrangements which were so effectively and impressively carried out for facilitating the inquiry. The delegates of Italy, Hungary, France, and Great Britain personally accompanied and assisted the commission in their respective countries. On this subject of rural credit I would respectfully call your attention to the inclosed copy of a letter to the Secretary of Agriculture.

6. THE INSTITUTE'S PUBLICATIONS, HOW THEY SHOULD BE DISTRIBUTED.

The equitable distribution of the institute's publications to which the United States is entitled has been a perplexing problem. I am sending you under separate cover a copy of the present mailing list, showing where and to whom these publications are now sent. (A

subsidiary list is in preparation by the institute.) This list is the best that I could devise from the limited information at this end, but I feel sure that it ought to be improved upon.

With this end in view I would suggest:

First. That this list be returned me revised by the Department of Agriculture and the Department of Commerce; or

Second. That the institute's publications be transmitted to these departments in bulk, when they could be distributed from Washington.

Third. A saving could no doubt be effected in the cost of transmission if the packages were forwarded through the Smithsonian exchange, provided, however, that arrangements were made whereby transit could be as rapid as by ordinary postage; or,

Fourth. Under your instructions the institute's publications could be sent under frank through the embassy's mail bags. Please take note that any saving effected in the cost of postage at the institute end would entitle the American people to a compensating increase in the number of publications for free distribution.

The publications consist of the following:

1. The Bulletin of Agricultural Statistics and the Commercial Bulletin (25 to 30 pages). These ought to go to farmers, chambers of commerce, boards of trade, and some Members of Congress.

2. The Bulletin of Economic and Social Intelligence (150 to 200 pages) dealing with cooperation, agricultural credit, and insurance. These should go to the State and Pomona granges, farmers' institutes, and other leading agricultural associations, important colleges, universities, and libraries, some Members of Congress, and State legislatures.

3. The Bulletin of Agricultural Intelligence and Plant Diseases (150 to 200 pages). These should go to agricultural colleges, libraries, experiment stations, and farmers' organizations.

4. The Weekly Bibliographical Bulletin (10 to 20 pages), touching all current publications on agriculture. These should go to colleges and libraries.

5. The Yearbook of International Agricultural Legislation (1,000 pages), giving in full or in abstract all the important legislative measures affecting agriculture enacted in the world during the year. These should go to the leading Members of Congress and to the more important libraries.

6. The International Yearbook of Agricultural Statistics (350 to 500 pages); this is an inventory and balance sheet of the agricultural resources of the world, giving for all the countries, in a series of comparable tables, the data on the world's area and production of the crops and on the available supply of live stock. The issue now under preparation will also give, besides the above, the statistics of international trade in the staples. These should go to the leading farmers' associations, the chambers of commerce, Congressmen, universities, and leading libraries.

In addition to the above the institute publishes from time to time monographs on important subjects directly and indirectly affecting agriculture.

As illustrating the difficulties met with in guiding distribution from this end, I will cite the case of the Yearbook of International Agricultural Legislation. This is recognized by the highest competent

authorities as a very valuable production, especially for legislative bodies, Government departments, and national publicists. As it is a costly publication the United States was only entitled to 100 copies. In the endeavor to circulate them with great care I sent to the United States, up to date, about 10 copies, holding the remainder to be distributed in the most effective quarters. They are still on hand, in the institute, and I am at a loss to know just where they should go.

As an example of the valuable service which is being rendered by the institute's publications I need only point to the fact that the circulation in the United States of the Bulletin on Economic and Social Intelligence, dealing with the cooperative credit systems, has had, as you may know, the effect of arousing nation-wide interest in this question. In addition to the institute's regular publications of the subject there were sent out from the American room in the institute over 150,000 supplementary pieces of literature, consisting of monographs, outlines, pamphlets, etc., mainly addressed to farmers, and sent to every section of the United States. By order of the Senate and House of Representatives, quite a number of these publications were reprinted as public documents and circulated widely by the Southern Commercial Congress among the American farmers.

All of this resulted in the action taken by the United States Government and by the American commission in investigating abroad the European systems of cooperative rural credit, and has led to the present broad and general discussion and widespread interest in this question. The subsequent results that may be looked for from all this will therefore be attributable to the initial, pioneering work done in America by the institute's publications.

From all the foregoing I would most earnestly urge that the matter of the distribution of the institute's publications be taken in hand and done under the auspices of the American Government Departments. I am anxiously awaiting your instructions relating to this matter.

I have the honor to remain, sir,
Your obedient servant,

DAVID LUBIN,
*Delegate of the United States,
International Institute of Agriculture, Rome, Italy.*

AUGUST 27, 1913.

HON. DAVID HOUSTON,
Secretary of Agriculture, Washington, D. C.

DEAR MR. SECRETARY: AS I deem the matter at issue of sufficient importance I will quote from a letter of Senator Fletcher's (Aug. 5) and offer some comments on the same.

Referring to previous correspondence with me on the subject of the adaptation to American needs of the German Landwirthschafts-rat system, the Senator speaks of an "agricultural organization committee of America" which, he learns, is being formed "under the presidency of Mr. Gifford Pinchot," and he goes on to say:

Our Agricultural Department, through Dr. Carver, is undertaking that identical work. Why not leave it there, with our American commission cooperating?

I am inclined to concur with Senator Fletcher's suggestion. This work should be done jointly by the Government of the United States, through its Department of Agriculture, and by a national organization like that of which Senator Fletcher is the presiding officer, the name of which is the Permanent American Commission (on Agricultural Finance, Production, Distribution, and Rural Life).

Acting through a joint organization of the nature of the one contemplated would be, I believe, an essential factor in the economic development of American agriculture.

It is now over a year ago that I drew Senator Fletcher's attention to the utility in Germany of the *Landwirtschaftsrat*, and of the similar institutions in Austria and some other European countries. The *Landwirtschaftsrat* is an organization of vital economic importance to Germany. It can be adapted with few and minor changes to American needs. While the American commission was on its tour of investigation in the European countries it made some inquiries on this subject, the results of which can be supplied you by Senator Fletcher. In addition to this I would, if desired, send on further detailed information, as the principal officers of these organizations both in Germany and Austria are my colleagues on the general assembly of the International Institute of Agriculture and would therefore, I feel almost sure, be pleased to furnish me with further particulars.

The *Landwirtschaftsrat*, or Council of Agriculture, is a national organization of semiofficial character, under the auspices of the German Government, operating under imperial German law, and on which are represented the voluntary associations of farmers. Its functions are to promote the economic condition of agriculture and to act as an officially recognized advisory body to the Government on all economic questions affecting agriculture.

The joint effort of your department, acting in conjunction with a national organization reaching the associated farmers, would, in my opinion, be the most effective means of materializing such an association in the United States.

The needs for such an organization can best be represented by an illustration. Let us suppose there are two manufacturing plants, two factories supplied with electric power. The first has its wires all connected to a dynamo whence the power can be transmitted to any part of the plant at will. The second has also a dynamo and machinery, all in order, but with the wires disconnected at the vital point; turn on the power and it runs off into space; it does not operate the machinery.

The first plant, the one in which the wires are connected up with the dynamo, may be compared to the *Landwirtschaftsrat* system operating in Germany. The second plant, in which the wires are disconnected, may be compared to the systems operating in the United States.

Now, if any such system as the *Landwirtschaftsrat* were to be founded in the United States solely as a Government institution, it would become inoperative, because governments can not initiate and carry out dynamic labor among private associations; governments are necessarily static. And, on the other hand, an institution like the one above referred to, if conducted solely under unofficial auspices, would be likely to become inoperative or to degenerate

into serving selfish ends. The cooperation between the official and the nonofficial factors composing the German Landwirtschaftsrat confers on it that equable poise which renders it so useful a factor in the economic life of the German people. The same needs which call for this Landwirtschaftsrat in Germany call for it in the United States.

There is yet another and important reason why the cooperation of Senator Fletcher's organization should be enlisted by you in this work.

The conference on rural credits, held at Nashville (April, 1912), under the auspices of the Southern Commercial Congress, led, as is well known, to two results. On the one hand, the diplomatic officers, under the chairmanship of Ambassador Herrick, were instructed to make an official inquiry into the European systems of cooperative rural credits. On the other hand, the American commission, in conjunction with the United States commission appointed by President Wilson, came to Europe and made an exhaustive investigation into the systems in the several countries. While no general conclusion as to the details and modes of adaptation of these systems in the United States has so far been formulated, yet the economic advantage due to their operation in the European countries is so obvious that it is quite safe to predict that some general system along these lines, safeguarded by State and National legislation, will be shortly presented to the American people for adoption. Pending this event, however, a danger presents itself. Schemes are being offered for public recognition, pressed forward on claims some of which are so patently divergent from facts as to warrant the conclusion that these schemes are dangerous misrepresentations which, if permitted to operate, would be likely to lead to widespread ruin.

As an example, let me quote from the announcement of one of these schemes, set forth in the San Francisco Examiner of July 22. The article referred to states that the project—

is built along the lines of those that have proved successful throughout Europe * * * lines that have made the Luzzatti institutions throughout Italy and the cooperative land banks of Germany and Austria such helpful sources of financial aid to all men who derive their living from the soil.

We are then given to understand that the plan has "already received" financial support "from the big commercial houses and important capitalists connected with the world of business," and calls for—

an authorized capital of \$10,000,000 * * * 51 per cent of the stock will be placed in the hands of five trustees * * * The bank will maintain an investment department where its stockholders could at all times obtain the best advice as to the investment of their surplus funds * * * As an example of the successful operation of a similar plan, a man by the name of Luzzatti, in Milan, opened his first bank in 1866 with \$140 capital. Following this plan, he has to-day over 700 banks, with a working capital of nearly \$200,000,000.

It would be difficult to find in a like number of sentences a greater number of misrepresentations. In the first place, the project outlined is not at all on the lines of the Luzzatti institutions; in fact, it does not follow the plan of the European systems at all. The European systems do not permit of "51 per cent of the stock" being controlled by capitalistic trustees. They do not maintain an "invest-

ment department" for the surplus funds of their stockholders. Luzzatti does not have "to-day 700 banks with nearly \$200,000,000"; the fact is that Luzzatti has not even a single bank, and if he has any investments in the cooperative rural banks at all it is safe to say that they are merely for a nominal sum, perhaps \$100.

In a communication of June 7 from Senator Fletcher, he inclosed a scheme of rural credits proposed by Mr. Charles Hall Davis, on which he asked my opinion, saying:

I am asking that you read it carefully and return the same to me with such comments as will set out as fully as you may your views on the subject.

In my reply I tried to show the grave danger of experimenting with new and untried schemes in this field, as such experiments have frequently led to disastrous results. Years of inquiry on this subject with primary authorities on the European cooperative rural credit systems lead me to believe that it would be safest for the American people to avoid experimenting with novelties in this field. I therefore presented what seemed to me the most practical basis for an American system, viz, the German *Landschaften* plan. I am inclosing a few copies of this document for your consideration. (S. Doc. No. 123.) I sent a copy of it to Ambassador Herrick, and in a communication from Paris of August 21 he says:

I think your statement to Senator Fletcher the most comprehensive I have ever read.

I would strongly recommend that this system, the *Landschaften* system, be closely studied by your department, as, in my opinion, it offers in the main a solution for the rural credit problem in the United States. Senator Fletcher could supply you with that portion of the American commission's investigations relating to this system, and if desired I could supplement this with additional information from primary sources here.

Clearly the "psychologic moment" has arrived for action; action by the United States Government. Having set the investigation on foot, with the wide publicity which this engendered, it is now incumbent on the Government to finish the work it began. And to this end it would seem to me that the preliminary steps should be:

First. For your department to join hands with Senator Fletcher's organization and to jointly undertake the task of neutralizing any ill-digested or untrustworthy credit schemes which may be offered.

Second. To direct this joint action toward devising and instituting in the United States an adaptable form of the *Landwirtschaftsrat*.

Third. To take joint action toward laying down the general lines which should form the basis for a safe and conservative cooperative rural credit system, such as would best promote the economic interests of the American people.

I am sending a copy of this communication as an addenda to my report to the Secretary of State.

With high esteem, I have the honor to remain,

Yours, sincerely,

DAVID LUBIN,
*Delegate of the United States,
International Institute of Agriculture, Rome, Italy.*

AUGUST 27, 1913.

Hon. WILLIAM C. REDFIELD,
Secretary of Commerce, Washington, D. C.

DEAR MR. SECRETARY: In accordance with the action taken by the general assembly of the International Institute of Agriculture in 1911, the publication of the institute's Commercial Bulletin began in March, 1912. It has since then been incorporated as the second part of the institute's monthly Bulletin of Agricultural Statistics. The Commercial Bulletin gives the data for the exports, imports, and visible stocks of the cereal and cotton crops, and also the prices quoted for the same on the principal market centers of the world.

The publication of the ruling prices on the world's market centers was deemed an important step. The argument brought forward in its favor was that this information would help all concerned to judge whether the ruling price in a given locality bore an equitable relation to the world price.

On the appearance of the first few issues of the Commercial Bulletin certain criticisms were made on the floor of the permanent committee on the mode of presenting these prices. It was contended that the mere statement of the prices ruling on the market centers was insufficient for the purposes they were intended to serve.

For instance, the Commercial Bulletin of November 22, 1912, gave the following as the ruling prices for wheat:

Antwerp, 20.42; Paris, 27.70; Liverpool, 20.27; Budapest, 25.20; Winnipeg, 15.04; Chicago, 16.09; Kansas City, 14.85; Minneapolis, 15.26; and Buenos Aires, 17.05.

But why was it that the price was 27.70 in Paris, 14.85 in Kansas City, 20.27 in Liverpool, and 25.20 in Budapest?

Operators in the market, who deal in large quantities, obtain additional and subsidiary data which they employ competent calculators to cast into definite shape, so as to have the facts in such form as to enable them to determine the equitable relation between the local price and the ruling world price, and shape their operations accordingly. But those who can not afford to do all this have no such information and are necessarily forced into vague guesses or have to trust to chance. It therefore follows that the mere publication of the price quotations without these subsidiary data would be of no practical value.

There is a way, however, of having the International Institute of Agriculture officially prepare this information and set it forth in its Commercial Bulletin so that it would inform all concerned as well or even better than the few great operators are now informed.

The principal factors which go to form the price of the staples of agriculture in each of the market centers are the following: (1) The summary of the world's supply; (2) the price paid to the farmer; (3) custom's duty; (4) brokerage; (5) insurance; (6) cost of transportation.

It was proposed that the institute obtain the current information on each of these items and publish it for the different market centers, so that by giving the current price at the world's market centers along with the factors which go to shape it, much the same as in a double-entry system of bookkeeping, it would be possible to determine whether the selling price in a given locality was in equitable relation to the current ruling price at the world's purchasing centers to the world's price.

Let me quote, as an example of what I mean, an illustration kindly furnished me in 1905 by Mr. John McGuirk, secretary of the Liverpool Corn Trade Association:

[Shillings per quarter of 8 bushels.]

	Price paid to farmer.	Transportation.		Insurance.	Storage, hauling charges, and interest.	Merchant's profit and broker's commission.	Price in Liverpool or Antwerp.
		Rail.	Ocean.				
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
United States.....	22 7	3 0	2 0	0 2	1 3	1 0	30 0
India.....	19 6	4 0	4 0	3	9	1 6	30 0
Argentina.....	17 6	6 0	4 0	3	1 3	1 6	30 0
Russia.....	19 1	5 0	3 0	2	9	2 0	30 0

The proposal to publish these items of information in the Commercial Bulletin in the manner set forth was rejected for the time being on the ground that some of the essential data would have to be obtained from unofficial sources and would, therefore, have to be excluded from the institute's Commercial Bulletin.

It was subsequently pointed out that this conclusion was not necessarily final, for the Governments could obtain these data from the available sources and transmit them to the institute, thus rendering the information official.

As a result of this presentation, the matter is now pending, and I feel sure that your valued and powerful support would materially aid me in carrying the measure in the institute.

Before dismissing this subject I deem it essential to draw your attention to the important results which it would be possible to attain through the publication of the data on cost of transportation, which form item 6 of the factors in price formation given on page 2 of this communication.

It is a well-known fact that the cost of ocean carriage for the staples of agriculture affects their home price; not merely the price for the quantity imported or exported, but the price for the entire quantity in the home market. To illustrate: If the ruling price for a bushel of wheat is a dollar at Liverpool, it ought to be a dollar in Seattle, Wash., less the cost of necessary deductions for bringing that bushel of wheat from Seattle to Liverpool. Now, say there are 100 bushels of wheat at Seattle, 30 of which are for export to Liverpool and 70 for home consumption. If the charge to be deducted is at the rate of 10 cents a bushel, or \$3 for the 30 bushels, the ruling home price for the 100 bushels will be \$70; but if the charge to be deducted be 5 cents a bushel, or \$1.50 for the 30 bushels, then the home price for the 100 bushels will be \$95; for the export and the home price of the staples of agriculture is always the same.

It will thus be seen that the cost of ocean carriage on the staples of agriculture not alone affects the producer whose product is sold for exportation, but it affects likewise the producer whose products are consumed in the home market. It not alone affects the producer, but it also affects the consumer; it affects all the people.

Now, it seems to me that the publication of the data on the world's supply of the staples, on the cost of carriage, and on the price, if given

in the Commercial Bulletin of the institute for a series of years and in the form contemplated, would, in the first place, bring before all concerned comparable data which could be turned to economic use.

Secondly, from a consultation with the leading officers of the British Mercantile Marine Associations in London, I am led to the conclusion that if the data above referred to were available it would be possible to effect economic changes in the cost of ocean carriage through cooperative action of farmers and merchants. If the shipowners could count on a full outgoing and return cargo, they could afford to charge a lower price for cost of carriage than would be charged otherwise.

Now, it seems to me it would be feasible to bring this about. The first essential step in this direction in the United States would be the adaptation and adoption of the German Landwirtschaftsrat system, with its chambers of agriculture all federated in a national central organization. (Please see inclosed copy of letter to Secretary Houston.) This federation, acting jointly with the federated chambers of commerce, could so arrange matters as to have the main bulk of the incoming cargoes of merchandise moved at a time when the same ships would find full return cargoes of the staples of agriculture for exportation.

It would seem to me that cooperative action between your department and the Department of Agriculture could soon place this whole matter in tentative shape. When in London with the American commission last July I brought this subject up with Sir Sydney Olivier, permanent secretary of the British Board of Agriculture, who seemed to view that matter sympathetically, as did also officials representing New Zealand and South Africa. Besides this I have had favorable communications on this head from the prime minister of New Zealand. From all this I am led to believe that Great Britain and her colonies would be inclined to second favorable action by the United States along these lines.

I shall await with interest an outline of your views on this subject for guidance in my action in the institute.

With high esteem, I have the honor to remain,

Yours, sincerely,

DAVID LUBIN,
*Delegate of the United States,
International Institute of Agriculture, Rome, Italy.*

THE LANDSCHAFTEN SYSTEM OF RURAL CREDITS.¹

DRESDEN, *June 22, 1913.*

Hon. DUNCAN U. FLETCHER,
United States Senate, Washington, D. C.

DEAR SENATOR FLETCHER: I have your letters with inclosures of June 6 and 7. In your letter of the 7th you hand me the article of Mr. Charles Hall Davis of June 3, wherein he speaks of his plan for State rural banks, and you say:

I am asking that you read it carefully and return the same to me with such comments as will set out as fully as you may your views on the subject.

I have gone over the article, and am of the opinion that Mr. Davis is deserving of credit for the manner of his presentation. His paper seems to be clear and logical, but whether his plan will be practicable is a different proposition.

In my opinion it would be safest at this time to avoid being tempted to take up with any new plan, however well and ably presented, however sound the seeming logic of its premise. The risk is too great for experimental ventures, for failure in a material direction would be likely to bring about suffering and ruin to many.

There is, however, no need of venturing out in the field of a new plan, for there are the tried plans in the European countries, plans which have been in operation for years, plans which are in operation, plans of incalculable benefit to the farmers of Europe, plans which would be of equal benefit to the farmers of the United States. That some changes will have to be made before any of the plans will be adaptable to the conditions of the American people may be admitted, but in no instance should this change be introduced at the expense of prospective security. There should be no accommodation on that account.

I have previously pointed out to you that in my opinion the most adaptable plan, and that allowing of widest application in the United States, would be the Landschaften system, provided that it be introduced in the United States with all the safeguards that surround it here in Prussia. With these safeguarding features slackened or vitiated, the Landschaften system in the United States would be likely to become a two-edged sword of destruction and ruin.

In my opinion there is no reason why the Landschaften can not be adopted in the United States with the same safeguarding features that operate in Prussia. The plan of the Landschaft is so simple that it may be explained to and understood by any person of average intelligence. Given State and national laws enacted for the United States on the basis of the European safeguarding method, and the matter becomes quite easy. A body of citizens in a certain locality, presumably neighbors, form a Landschaft operating under State and

¹ Letter from Hon. David Lubin, delegate of the United States to the International Institute of Agriculture, Rome, to Hon. Duncan U. Fletcher, chairman American Commission to Investigate and Study Agricultural Cooperation and Rural Credits in Europe, published as S. Doc. No. 123, 63d Cong., 1st sess.

national laws. As in operation in Prussia this Landschaft has limited functions, restricted in the main to the trusteeship of the mortgages on which it issues the Landschaft bonds. As stated to the American commission at the meeting at Dresden by Hofrat Bach, the "Landschaften are an association of borrowers, in contradistinction to the joint-stock mortgage banks, which are associations of lenders."

The Landschaft transacts no banking business whatever; in fact, it transacts no business except that above stated—that is, it gives the borrower a bond for his mortgage; the borrower then proceeds to sell the bond in the open market and puts the money in his pocket, and that is the end of the money so far as the Landschaft is concerned. All it asks of the borrower is to hand in the interest and amortization on his bond. If he does not do this, the Landschaft takes possession of his land, has it sold to the highest bidder, and returns to the borrower any balance left over above the amount for which he was given a bond, and the costs. The Landschaft can do this in Prussia without any recourse to a lawsuit. Substantially, the Landschaft in all this has the power of final decision vested in a supreme court. If no such power can be granted, then it would be unsafe to have a Landschaft in the United States; in fact, we could not have it, for the purpose of the Landschaft is to secure long-time loans with amortization at 3, 3½, and 4 per cent, and this interest rate would double or treble itself as soon as doubt as to the validity of titles and other questions between borrower and lender would be considered admissible. The Landschaft in Prussia has no such questions to contend with. The Landschaft directors foreclose without recourse to lawsuits. Their decision is final.

And the question may be asked, Would not such a Landschaft system be likely to lend itself to failure through dishonesty or incompetency on the part of the directors? It certainly would if it were not for the safeguard furnished by State and National laws. In Prussia this safeguard is the *sine qua non* of the Landschaft. One of the members of the board of directors of the Landschaft is appointed by the King—appointed for life—while the other members are in substance semigovernment officials so long as they hold the position of directors of the Landschaft. It is the safeguarding, the rigorous safeguarding, of this system by the Prussian Government that gives the bonds the high value they have in the open market and which makes them salable at the low rate of interest which is paid on them. Remove this Government safeguard and the bonds will slump in price at once, and the interest would have to be doubled or trebled before they would sell. In fact, such bonds would not sell at all, for a bond in the open market, subject to the law of a certain district, administered in that district, may only have a limited and a local value. Such a bond would not be liquid; it can not be liquid, and to attempt to make it so would but invite ruin. The need for national government safeguard is clearly indicated in the statement made to the American commission at the Dresden hearing (June 22, 1913), which, in speaking of cooperative credit societies before national law was enacted for their safeguarding, says:

All these societies did a good business * * * until a crash came in 1873 and swept away the *Vorschuss Verein* with it—many were rendered bankrupt, others forced to go into liquidation. * * * In this way the further life of such societies

practically ceased in Saxony for the next 20 years or so; but in 1889 came the great German imperial law, which is to be thanked for the splendid revival of cooperative societies in Germany.

This law provides for the rigorous Government supervision of all cooperative credit societies.

So, then, we must either have the Landschaft system safeguarded in the United States by State and by National law and administered as rigorously as in Prussia, or we can have no Landschaft system operating safely in the United States.

In my opinion it will be found just as possible to have the Landschaft system in the United States as it is to have it in Germany; for what will be asked of the United States? Will it be to lend the farmers money? No. Will it be that the Government of the United States should guarantee the bonds? No. What then? The United States will simply be asked to act as umpire between borrower and lender. The United States is to see that both parties adhere strictly to the terms of the contract. That is all. And it may be that some simple mode of procedure can be put in operation toward this end without at all infringing upon the Constitution. Perhaps this can be done through some such body as the Interstate Commerce Commission, or by some other body created for that purpose. Such body should be granted the right of dealing with the bonds issued in one State and bought and held by citizens of various States of the United States; clearly an interstate transaction.

I have before me the financial supplement of the *Vossische Zeitung* of Berlin (June 13), giving stock-exchange quotations. Ample space is given for the quotations of the Landschaft bonds. Let us compare a few of these quotations with those given in the same paper for the Government bonds of Germany for the same day.

	Government bonds.	Landschaft bonds.
4 per cent.....	96.00	100.00
3½ per cent.....	84.80	96.00
3 per cent.....	74.80	80.50

From this it will be seen that the Landschaft bonds stand higher in the open market than the Government bonds bearing the same rate of interest.

And now another point. It may seem that the Landschaft system would only be in the interest of the American farmer. This, however, is but one phase of its benefits, and by no means the only important one. There is another section of the community of equal importance to the farmers, if not more so, to whom the benefits of such a system would go. I refer to the widows and orphans. Above all investors these require the greatest security and are at the same time by themselves the least capable of investors. Be it understood that making a safe investment of money is a perplexing and difficult task even for a man well posted in matters of finance. How much the more so for women, who have had very limited or perhaps no experience at all in the investment of money. It is incumbent upon the National Government to aid in the safeguarding of such funds,

for if it be the duty of government to be policeman, umpire, in the matter of equity between individuals, in the preservation of the sanctity of contracts, it is certainly within its province to spread its sheltering wings over the otherwise defenseless funds of the widows and orphans.

And in this we are taught a lesson from the example of Germany. The Prussian *Landschaft* is in the main an institution affording a safe investment for the funds of the widows and orphans. The safeguarding of the *Landschaft* by the Prussian Government renders its bonds so high and the interest so low as to preclude their purchase by professional money lenders. Their almost absolute security, however, renders these *Landschaft* bonds as safe an investment and with less chance of fluctuation on the open market than Government bonds, as illustrated by the quotations above given. They are therefore largely bought as investments for the funds of the widows and orphans, and consequently are so securely safeguarded by the Prussian Government.

This commendable action on the part of the Prussian Government reminds me of an historic event in past times indicating the high humanitarian reach in this direction attained by the people of Israel, and the manly acquiescence in this exalted stand by the great Roman general Pompey. After a stubborn resistance Pompey succeeded in capturing Jerusalem. He and his soldiers, in an endeavor to recoup themselves for the cost of the war, entered the temple for the purpose of spoil. Going into the holy of holies, where he expected to find statues of gods and goddesses, images of silver and gold, Pompey found a room devoid of such statues, for it only contained a great golden candelabra and a golden table for the shew bread. This was, no doubt, a disappointment to Pompey. He was, however, told that there were ever so many sacks of gold and silver in the vault of the temple. On going there he found a great number of bags of gold and silver, all neatly done up with labels on each. "Why," he asked of the priest, "did you not tell me of this treasure before?" "Because," said the priest, "this is the sacred treasure; these bags contain the funds of the widows and orphans of the people of this country. We therefore consider them more sacred than the offerings to God."

Pompey thought for a while, then ordered his soldiers to wheel about and march out, and never touched this treasure.

And this lesson is sufficient. The American Government should safeguard the funds of the widows and orphans, for the American people, like Israel of old, is a righteous Nation.

Nor need there be any hesitation at taking such action on the ground that it would be socialistic; if it be socialistic at all it is not socialism of the collectivist order, but it is on the order of Herbert Spencer, the individualist. Mr. Spencer laid down the proposition that the chief duty of government is that of policeman, umpire; that its chief duty is to arbitrate between contracting parties; to judge between them, and to determine the equities.

And what duty can be more just for a government than arbitrament in the case of such a body as the *Landschaft*, between the farmer, the money borrower, on the one hand, and the widows and orphans, the money lenders, on the other?

In corroboration of the above I wish to quote the opinion given by the eminent German economist, Prof. Brodnitz, of the Halle University. In reply to my inquiry (June 15, 1913) as to what guaranty there would be for the rigorous supervision of the *Land-schaft*, he replied:

The best possible, for the bonds at the high prices at which they sell and at the low interest which they bring do not tempt regular money lenders to invest in them. They will be bought up mainly as investments for the funds of widows and orphans. This being the case there will be every reason to believe that these investments will be safeguarded by the Government with such caution and care as to preclude all danger of fraud or repudiation. And this great care and caution would give these bonds a value as high and perhaps render them steadier even than Government bonds, especially in times of war and panic, as for instance was the case in 1806 during the Napoleonic wars, when the *Landschaft* bonds were high and the Government bonds low.

Now that the question of rural credits has been so fully placed before the American people, it might be presumed that the American farmer had been thoroughly awakened to its importance. This is, however, far from being the fact. It is true that the farmers of America are learning more and more what it all means as time goes on, but at the present writing there are quite a number of farmers who are under the impresssion that any system of rural credits would be an evil; they are under the impression that the best thing for a farmer is to keep out of debt of any kind. These farmers fail to realize the fact that for a business man or farmer to follow such a plan literally would require a surplus bank account subject to call, and therefore on deposit without interest. That is, quite a sum of money would have to be lying by idle, doing nothing, and such a mode of procedure is not a gain but a loss. Moreover, but very few farmers have such surplus money; so what must they do? They must buy all they need and pay for their labor and raw material on time—on long time—and this means buying money of the storekeeper, which means paying the highest rate in the world for money instead of the lowest rate in the world. It further means that such a system is not "keeping out of debt" at all, but keeping in debt, and at the highest possible cost for the debt. In fact, the American farmer has yet to learn the simple lesson taught by the experience of the American merchant. Say 40 or 50 years ago the American merchant could not obtain money on open account from the bank, so he was compelled to get into debt with the jobber, and it was then that the jobber took from the American merchant "all that the traffic would bear"; that is, the jobber farmed the merchant, and at the present time the storekeeper farms the farmer, and if the farmer would only know how much in debt this supposed "not-in-debt" system places him it would open his eyes. He would begin to see that the *Land-schaft* system, instead of being a proposal which would put the American farmer into debt, is just the very system which would put him on a cash basis.

If there be any farmers at all that have any doubt as to the truth of this statement, they can readily prove it. Let them go through the various stores in the cities nearest to their farms. Let them ask each of the merchants to tell them whether they utilize the credit which their assets entitle them to on the open market, or whether they refuse to make such use of these assets, and the farmers would presently find that there is perhaps not a single merchant of good

standing who does not avail himself of such credit. The only ones that are obliged to go without it are those who have a reputation for dishonesty or incompetency.

It should be understood that the financial functions of a business can be compared to the human breathing apparatus. The business needs a winter stock, which must be bought in summer, and a summer stock, which must be bought in winter, all of which requires surplus money, more money than the mean average level. There is periodic expansion and contraction. If the merchant has money lying idle, ready for use whenever he needs a dollar, then he is doing business in a clumsy and costly way, and quite unnecessarily if he has a good standing. His assets, if backed by good character, will give him a dollar at 5 per cent a year. With this dollar in hand, he can discount his bills at the rate of 5 per cent a day. In fact, he can discount and rediscount with the same dollar many times over that day and return the dollar to the bank and pay interest on it at the rate of one three-hundred-and-sixty-fifth of 5 per cent for the use of that dollar for that day. But the most profitable use of the money that the farmer can obtain on the security of his assets will be had in using it collectively, through cooperation, a corporation formed for that purpose. With the money that the security of their collective assets would give them the cooperative group of farmers, or, if you please, this corporation of farmers, could then perform all the functions now performed by the city commission man and by the trust. In fact, the farmers could be their own trust.

"But," say some, "what need is there for the *Landschaft* when farmers can act cooperatively without it?" Yes, that is true; they can act cooperatively without the *Landschaft*, without capital. But what does such action amount to? It is almost as ineffectual for the farmers to act on such lines as it would be for the trusts were they deprived of their capital or credit. Under such circumstances the trust would come to a sudden standstill; it would cease to be a trust. And in the final analysis the farmer without capital must remain subject to the trusts, who have the capital. The fact is, the collective assets of the farmers could furnish a capital very much greater than the greatest of the trusts could command. It is only a question of placing their assets in an available liquid form.

In 1885 the California fruit growers, for instance, seeing that they were in the hands of a couple of trusts, organized cooperatively to fight those trusts. The California trusts were each rated at a million dollars and over; the California fruit growers, for this conflict, only had a few hundred dollars to meet current expenses; and as a result of the fight they have been waging all these years, the couple of trusts are still there, doing business at the old stand, with almost the same power that they had in 1885. It was the trusts, each capitalized for a million dollars and over, that did the work and do the work. It was several million dollars against a couple of hundred dollars, and the couple of million dollars won out and will continue to win out on this line until the end of time.

But note how foolish and unnecessary this fight is. The trust has a couple of million dollars, but the California fruit growers could double and quadruple that couple of million dollars several times over if they were to place their assets in available liquid form—in a form of which the *Landschaft* system would permit. And so with the

farmers everywhere, they could become the distributors of their own products through the medium of the Landschaft system.

The Landschaft would be the mode for getting the money; that is all that the Landschaft could do. The farmers could then form another cooperative association, another corporation, their own cooperative bank, in which they could deposit the money obtained by the sale of the Landschaft bonds. This bank could in turn first give the farmers the open account, which would enable them to do business for cash; it could secondly furnish the money for the cooperative distribution of the products of the farm. All this would make it possible for the farmers to form the third and last cooperative group or corporation for the collective purchase of requirements and the collective distribution of their products. There would thus be three distinct cooperative groups, three corporations. First, the Landschaft; second, the cooperative bank; third, the cooperative purchasing and distributing association. The safeguarding proposal by the State and Nation would only refer to the Landschaft and not to the other two.

Pertinent to this whole matter is the very valuable suggestion in your letter of June 7, wherein you say:

Every city has its chamber of commerce; why not have chambers of agriculture established in the rural districts, and do this for the organization of the farmers in the cultivation, production, and marketing of their crops and in the financing of their affairs?

I think that your suggestion hits the nail on the head. These chambers of agriculture should be federated into a national chamber of agriculture, holding periodic sessions presided over by the Secretary of Agriculture or the Secretary of Commerce. Relative to this matter I wish to say that on June 20 Dr. Owens and myself had a lengthy conference with Dr. Dade, the secretary general of the Deutsche Landwirtschaftsrat, who gave a full and clear exposition of this organization and its purposes. The discussion took the form of questions and answers, and I will send you a copy of the report of same as soon as it is mimeographed.

I think you will read this statement with keen interest. It will be of material assistance to you in launching the chambers of agriculture for the United States.

With the renewed assurance of my high esteem, I am,

Yours, very sincerely,

DAVID LUBIN.

LETTER OF THE PERMANENT DELEGATE OF THE UNITED STATES TO THE MINISTER OF FINANCE OF RUSSIA ON THE FORM OF CROP REPORTS.

HOTEL D'EUROPE, ST. PETERSBURG.

To His Excellency Mr. VLADIMIR NICOLAIEVITCH KOKÒVTZOW,
Minister of Finance, St. Petersburg.

EXCELLENCY: Since our interview last Thursday I presented the subject of our discussion to your ministry of agriculture and to your ministry of commerce and industry and am now of the opinion that your request for written reasons for the demands of the institute was not alone reasonable but indeed necessary. I will therefore venture to submit these reasons in writing, confidently hoping that this presentation may be one of the means toward the end in view.

The following, then, are the reasons why the Russia "conditions of the growing crops" should be handed in to the International Institute of Agriculture as a percentage based on an average in the form of a "single numerical statement":

First. Because it is the only form in which the data of Russia may be employed with those of the other adhering countries, and thus enable the institute to reduce by mathematical calculation the data of all the adhering countries to a "single numerical statement" for the world.

Second. The single numerical statement of the institute can not be misinterpreted or twisted, whereas such words as "good," "very good," "middling," "bad," "very bad," are so subject to misinterpretation and twisting that they have no legitimate commercial value. As a result, they are only employed by manipulators of the markets and at the expense of producers and consumers.

Third. To prevent the institute from employing the data of Russia on the "condition of her growing crops" in the manner prescribed by the institute, would be to prevent the institute from giving the status of the world's supply in the only form in which it can have a commercial value, in the form of a "single numerical statement." In other words, it would prevent the institute from performing the principal function for which it was organized.

It will indeed be gratifying to the friends of the institute to note the favorable stand your excellency is pleased to take on this subject. Your desire to have the various phases of the case seriously, logically, and justly considered is seconded by some of your worthy colleagues in the other ministries I have visited. There are, however, some opinions expressed which it is deemed essential should be brought forward. Among them are the following:

First. The opinion that it is beneath the dignity of Russia to give out statistical figures which are not identical with facts.

Second. That Russia performs her duty when she gives out the facts in the case in such terms as "good," "very good," "middling,"

"bad," and "very bad." And if the private crop reporting agencies everywhere see fit to twist and misinterpret this information it is not Russia's will that they do so, nor is it Russia's fault.

These opinions seem at first glance to be correct and logical, but let us first see if they are so.

First. It is true that the data on the "conditions of the growing crops" are really statistical? Can they be called "statistics"? They certainly can not, for statistics proper are facts of the past. They are static facts. But when we are considering the "conditions of the growing crops" the fact is no longer static, it is dynamic. The static facts hold good for the months of October, November, and December, when the harvest returns are collected and assembled. We are then dealing with certain definite quantities, but when we are viewing a growing field in the months of April, May, June, July, August, and September, and comparing the growth of a certain month this year with the condition of its growth of previous years we are not giving out a statistical fact in the true signification of the word "statistics" when we say that the present growth is 5 per cent better or 5 per cent worse than it was in previous years.

Second. Russia is certainly not performing her duty to herself nor to the other countries of the world, when she gives out the condition of her growing crops in such terms as "good," "very good," "middling," "bad," and "very bad," for by so doing she gives the private agencies the very material that they want in order to permit them to twist and misrepresent this information. Is this not so?

There is yet a third reason given by the objectors to the "single numerical statement." They say, "How can we make a statement that the crop looks 5 per cent better or 5 per cent worse, when a week after that report is out, the crop may be destroyed by hail or by some other cause?" This seems a sound argument, but is it so? The condition of the growing crop is given out for the precise time in which it is taken; at that moment the crop looks 5 per cent better or 5 per cent worse than in previous years. That is the fact that is given out; from this fact we obtain a bearing on the situation as it is, permitting thereby inferential calculations of the current price and the probable ruling price for the future, all of which is necessary information for the producer, for the manufacturer, for the man of commerce, and, above all, for the statesman mindful of the financial and economic situation of his country.

If the Governments of the world will not come together on an official and authoritative report giving the summary of the world, then we must rest satisfied to permit the private crop-reporting agencies to assume this task, and in doing so we must understand that there is no binding force to compel these private agencies to give out the exact import of the data they receive. They can, if they please, give out data which they have never received at all, or they can so present the story of the situation as would be most likely to shape the market their way, or in sympathy with the wishes of their clients. And what if this be done? Who suffers? Is it merely the country that exports? By no means. It affects equally the country which imports, likewise so the country which neither exports nor imports. It affects equally the great country and the small country; the country nearer to the world's market centers and the country farther removed from them. It affects equally the free-trade countries and

the protective countries. It affects the high and the low, the rich and the poor. It affects every living human being on the planet. It affects him from infancy until the last day of life. The effect only ceases with death; and it is this terrible force, overshadowing any other earthly power whatever, that we are placing in the hands of the private crop-reporting agencies when we permit them to give out in their own fashion and after their own fashioning the report of the condition of the growing crops of the world. So long as we permit them to do that, we permit manipulators to sit at the table and play the chess game with the world's prices of the staples of agriculture, prices which affect not alone the capital and labor of all the land of the world, but also the capital and labor of the factory, for these products are the raw material of manufactures. And while the hands of the manipulators move the chess pieces on the table, directing and influencing the world's prices, their feet at the same time rest upon the backs of the governing forces of the nations crouching under the table. How then can a condition like this be called "competitive"? How can a monopoly be called competitive? And among all the monopolies of the world what kind is more fraught with damage to the people and danger to the State than one permitting private crop-reporting agencies the monopoly of information which influences, directs, and determines the world's price of the staples of agriculture?

And now we come finally to the last of the opposing arguments. We are told that the statistical service of Russia is as yet practically in too crude a form to permit her getting out the report of her crop conditions in the form of the "single numerical statement." Is this true? It certainly is not, for, as we have seen before, a report of the condition of the growing crops differs materially from a report of the harvest yield. A report of the harvest yield is a statistical fact. We count the sacks, or bales, or bundles, but in the "condition of the growing crops" we give the state in which they are as compared with what they were before. While a farmer may have forgotten how many sacks or bales he produced in former years, his memory is quite sharp in comparing the present state of his growing crop with that of former years. And even if this farmer does not report at all, the government forces of a nation ought to know, and do know, the status of the growing crop of that nation. They ought to know and do know, for how otherwise could the budget of the nation be maintained during the current year or be prepared for the coming year? In a measure this fact is known even in a country as feebly organized as Morocco. How much better ought it to be known, and is indeed known, by a great country like Russia? To say that the manipulators of foreign countries know this fact better than the finance ministers of Russia would be equivalent to saying that the budget of Russia would be safer in the hands of the foreign manipulators than in the hands of her ministers of finance; and as this is too absurd to be true, it must follow that Russia can to-day give the institute a far safer, truer statement of the condition of her growing crops than that currently given out to the world by the private crop-reporting agencies.

It may be freely admitted that at the present time this service is but crudely developed in Russia. Well, it is at this time but crudely developed in almost all the countries of the world. But be it remembered that it is not so long ago when the timepiece of the Kings of England, their clock, was a great wax candle with painted rings, and

when the candle burned down to the ring of a certain color it was supposed to be a certain hour, but the time has come when even a poor man in England may have on his person a watch to tell the time. And so, even if at this present time in the world's history the mode of ascertaining official information of the world's supply of the staples be crude, it will presently, through experience, have the crudeness polished away, when in the end science and precision shall determine the modes of procedure.

But shall not Russia wait, wait until this branch of the service shall have been more fully developed before giving the institute the facts it should have? The answer to this is clear. There should be no delay; not even a delay of one month. Russia should give the institute the necessary information, and in the form in which the institute should have it. The giving of it at once will begin to give Russia the experience necessary to perfect her service. She must do so if the institute is to live. The institute can not give a world summary without Russia, and the adhering nations of the world can not be expected to support the institute with the great funds that it requires unless the institute performs the function for which it was organized. The United States Congress, for instance, at its last session voted some \$18,000 for the year's appropriation for the institute. Can the United States be expected to renew these appropriations if Russia should persist in withholding the necessary information from the institute or in giving it in the form in which the institute can not use it? The persistence of Russia on that course would be equivalent to the dissolution of the institute. We can very well understand that such a course would be the wish of the manipulators. It certainly can not be the stand of Russia. It is as clear as daylight that as soon as Russia understands the bearing and significance of this subject she will at once give orders, orders which will be obeyed, that the institute be supplied with the reports of the crop conditions in the form in which they can be of service to the institute.

In concluding this paper I do so by inclosing the opinion on this subject of the Hon. Victor H. Olmsted. Mr. Olmsted was one of the United States delegates to the last general assembly of the institute; he is Chief of the Crop Reporting Bureau of the Department of Agriculture of the United States and is unquestionably of the highest authority on the subject under discussion.

I shall now leave the matter in your hands and in the hands of your worthy colleagues of the various ministries of your Governments which I am led to believe are concerned in the question, confident in the hope that you will give the subject the serious attention its merits may deserve.

With the assurance of my high esteem, I have the honor to remain,

Very truly, yours,

DAVID LUBIN,
*Delegate of the United States,
International Institute of Agriculture, Rome, Italy.*

BERLIN, *June 17, 1911.*Hon. DAVID LUBIN, *St. Petersburg.*

DEAR MR. LUBIN: My special work is progressing satisfactorily and will be completed a few weeks hence. I hoped to go to St. Petersburg, but am unable to do so at present. I therefore beg leave to advance a few reasons why every important nation of the earth should not only be willing but also anxious to enable the International Institute of Agriculture to supply such tangible, definite information to all the world as will be of real substantial benefit and value regarding the condition of growing crops, from month to month, from planting time until harvest.

First. The different nations have established and maintain various systems of crop reporting which are not of uniform character.

Second. In order that the results of these various systems may be reduced to a common basis, so as to combine them into a single definite statement for the entire world, it is necessary that the results reported by each separate nation be interpreted and transformed into a common expression, or, in other words, into a "single numerical statement."

Third. All the nations, with two exceptions, are fully in favor of such transformation and interpretation, wherever necessary, by the statistical branch of the International Institute of Agriculture. Of these two nations, one (France) is favorably inclined and will undoubtedly give full indorsement and consent to the proposal in the near future. This will leave Russia only standing out in an attitude of opposition; and I must believe that the Government of Russia will also join with the other nations in agreeing to the proposal, for the following reasons:

(a) The crop reports of all Governments which are not expressed in numerical statements are interpreted as soon as issued by a large number of irresponsible private agencies.

(b) These private agencies are often inspired by selfish motives and interests which cause them to make wrongful, biased interpretations for the purpose of improperly influencing prices for the personal gain of speculators, who by their manipulations, aided by the false interpretations, cause prices to rise or fall at will, to the enormous loss of both producers, consumers, and honest dealers.

(c) The reports of countries who indicate the crop conditions by descriptive words (instead of figures) are capable of being given meanings and interpretations as various and variable as the personalities and selfish requirements of the private agencies who interpret them.

(d) The International Institute of Agriculture is a public agency with no private ends to serve and no speculative interests to assist. Its methods are scientific and its work is absolutely unbiased.

(e) Interpretations given by the statistical branch of the institute must, therefore, command universal respect and confidence and eventually drive the numerous private agencies out of business.

(f) No government can prevent any private agency from giving such interpretations to its reports as selfish and speculative requirements may demand.

(g) Inasmuch as the private agencies can not be prevented from making wrongful interpretations, it appears inconceivable that any

government will prevent the institute from making honest interpretations by withholding consent thereto.

(h) It is manifestly to the best interest of the government and people of each nation that they should be honestly informed as to crop conditions throughout the entire world. Such information can not be supplied reliably and honestly except through the International Institute of Agriculture. It follows therefore that every government should not only consent but should eagerly desire that the institute make such interpretations of its reports as will enable the publication of a "single numerical statement" for the world. No harm can possibly befall any government by such a procedure; on the contrary, each and every nation will be benefited thereby.

(i) If a single important nation (as for example Russia) refuses to consent that the institute shall interpret its reports, such nation not only deprives itself of the benefit of the "single numerical statement for the entire world," but it prevents the other nations from receiving such benefit and plays into the hands of private agencies and iniquitous speculators, it being self-evident that a "world statement" can not be formulated without including the reports from every important agricultural nation, every one of which must necessarily be reduced to a common denominator, a uniform expression, a "single numerical statement."

Pardon me for this long exposition; I feel strongly regarding the subject, and this must be accepted as my excuse. I hope to hear from you in the near future.

Very sincerely, yours,

VICTOR H. OLMSTED.

(NOTE.—Mr. Olmsted was one of the American delegates to the general assembly of the institute. He was the chief of the crop reporting bureau of the Department of Agriculture of the United States.)

THE COMMERCIAL BULLETIN AND THE FACTORS IN PRICE FORMATION.

By DAVID LUBIN, Delegate of the United States, International Institute of Agriculture.

It is a gratifying fact that the institute now accomplishes that portion of the labors assigned it by article 9 of the treaty, which deals with the data on the world's supply of the staples of agriculture. Month by month it telegraphically disseminates its crop reports, which appear in the journals of the adhering nations. Thus the institute is now imparting to all the world authoritative and official information on the world's supply.

So much for the supply. And now the institute is about to begin the publication of its Commercial Bulletin in a form which will enable it to deal with the second portion of the task assigned it under this same article 9 of the treaty. That portion deals with the commercial phases of these staples, with their exports and imports, and with the current prices ruling for them on the principal market centers of the world.

And now this question presents itself, Will it be sufficient for the institute to publish the current ruling prices? I do not think so, for obviously to carry out the intention of the treaty it is not sufficient merely to set forth the facts as to what the current prices are. The institute should also supply the kind of data which would indicate how these prices are arrived at, so as to permit all concerned to see whether any influences are at work adversely affecting them, and how these adverse influences may be set aside. This information, together with the data on the world's supply, which it now gives, will complete the circuit of the institute's labors in the field of price formation.

That the mere publication of ruling prices is insufficient to indicate the presence of any adverse influences in price formation or the mode of dealing with them will be seen from the following illustration:

The Commercial Bulletin of the institute for December, 1912, gives, on page 335, the quotations (in francs) for December wheat for the week ending November 22, as follows:

Antwerp, 20.42; Paris, 27.70; Liverpool, 20.27; Budapest, 25.20; Winnipeg, 15.04; Chicago, 16.09; Kansas City, 14.85; Minneapolis, 15.26; and Buenos Aires, 17.05.

Now, what are we to understand from the above quotations? What do they teach us? How are we to interpret them? How are we to profit by reading them?

Since Liverpool is the prominent buyer, the great importer of wheat, how does it happen that while its price is 20.27 the price in Paris is 27.70 and the price in Budapest 25.20? If Liverpool could lay down wheat at 20.27, why could not Paris and Budapest do the same? What cause operated in Paris and Budapest to raise the price from 20.27 in Liverpool to 27.70 in Paris and 25.20 in Budapest? Then, again, why should the price be 15.04 in Winnipeg when it was 17.05 in Buenos Aires? Why was it 16.09 in Chicago and 14.85 in Kansas City when Liverpool was paying 20.27? The mere statement of the prices gives no answer to these questions.

Presumably one of the causes for these differences was the protective tariff that raised the price, and this fact should be stated. But this is far from being the only factor to account for the variations in price from the places of production to the market centers, and especially on the world's principal importing center. Besides the tariff, there is also the more important factor of transportation.

Now, unless all concerned are able to understand from the information given by the institute the reasons for the variations in price on the different market centers, they would not be adequately informed, and the institute will not have completed the task for which it was founded. To give the prices alone is like giving the summary from an account in single-entry bookkeeping—it proves nothing. Whereas if all the factors which go to make the price are given, the summary of the same, the current price, would be proven as in a double-entry balance sheet.

And pertinent to this I present an outline indicating several of the factors which go to make up the price. This outline was kindly prepared at my request in 1905 for the use of the institute by Mr. John McGuirk, secretary of the Liverpool Corn Trade Association:

[Shillings per quarter of 8 bushels.]

	Price paid to farmer.	Transportation.		Insurance.	Storage, hauling charges, and interest.	Merchant's profit and broker's commission.	Price in Liverpool or Antwerp.
		Rail.	Ocean.				
	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
United States.....	22 7	3 0	2 0	0 2	1 3	1 0	30 0
India.....	19 6	4 0	4 0	3	9	1 6	30 0
Argentina.....	17 6	6 0	4 0	3	1 3	1 6	30 0
Russia.....	19 1	5 0	3 0	2	9	2 0	30 0

Laying aside the minor factors in this example, let us take up the major, the factor of transportation. Assuming that Mr. McGuirk's figures were correct, how did it happen that the average cost of transportation from the United States to Liverpool was 3 shillings rail and 2 shillings ocean, or 5 shillings in all, whilst the charges for the much nearer distance, Russia to Liverpool, were 5 shillings rail and 3 shillings ocean, or 8 shillings in all?

In this connection I wish to say that while in London, about the same time that Mr. McGuirk handed me the above example, I called on the president of the Baltic, the great merchant marine association of Great Britain, who assembled some of the important members of his board. We went over the proposed work of the institute and its possible bearings on the merchant marine in so far as it deals with the carriage of the products of the farmer. Those present manifested a deep interest in the subject, and a general discussion followed, so far as I could see, on sympathetic lines.

It was well if there were a clearer and more general understanding on the subject of the close relation between the cost of ocean carriage (charter rates) and the home price of the staples of agriculture, and its important bearing on the economic status of a nation. To give an idea of its importance let us compare the difference between the bearing of the cost of ocean carriage in its influence on the home price of manufactured goods and the bearing of the cost of ocean carriage in its influence on the home price of the staples of agriculture.

Take, for instance, the case of a certain cargo of pianos clearing from the port of New York to Liverpool. What difference will it make in the home price of pianos in the United States whether the charges for the ocean carriage of this cargo be \$5 or \$10 for each piano? None at all; the home price of pianos will not be affected by this cause.

And now let us take the case of the staples of agriculture. Say that the Liverpool price for a bushel of wheat is \$1; that is, the buyer will pay \$1 for a bushel of wheat delivered at the warehouse in Liverpool, or he is willing to buy it in New York at the Liverpool price less the cost of delivering it at the Liverpool warehouse. Thus, if the cost of carriage from New York to Liverpool be 5 cents per bushel, he will pay 95 cents a bushel in New York; if the cost be 10 cents, he will then pay 90 cents a bushel. In the first instance the New York price will be 95 cents, in the second instance it will be 90 cents.

The price for what? Will it be the price per bushel for the quantity exported merely, or will it be the home price, the New York price? Clearly the latter; for, as is well known, there is no distinguishing in the wheat pit between the buyer for export and the buyer for home use. If the buyer for export can buy for 90 cents, why should the buyer for home use pay more? In fact, he does not pay more. Consequently, we see that if the charter rate, or cost of ocean carriage, be 10 cents instead of 5 cents, the farmers of the United States, on a crop of 700,000,000 bushels of wheat, would lose 5 cents a bushel on 700,000,000 bushels; that is to say, they would lose \$35,000,000. And what is here said applies not merely to wheat, but to all the staples of agriculture.

It will thus be seen that the question of the charges for ocean carriage concerns vitally all the farmers of a nation, and more than that, it concerns vitally the economic status of the entire nation. Nor does this influence cease here. High charter rates, excessive cost of ocean carriage, at, say, Buenos Aires, will not alone lower the home price in Argentina, but it may lower it in the United States, in Germany, in Russia, all over the world, for while the press publishes telegraphic information on current prices, it does not, at the same time, give the current charges for ocean carriage, and so long as information on prices on the one hand, and on cost of carriage on the other, is not given out simultaneously to the public, so long will the public be left ignorant of the factors which form the real basis for determining the world's price.

During the meeting with the president of the Baltic and his board I further brought up the question whether a plan could not be devised which would permit the maintenance of a minimum rate for the carriage of the staples without adversely affecting the economic interest of the shipowners.

I was given to understand that before that question could be answered it would be necessary to bring into view the causes which now operate and which largely determine the fixing of rates and their fluctuations.

From time to time the various mercantile marine associations and the shipowners map out in advance the routes for their ships, and in a manner calculated to give them an outgoing and a return cargo. And right here comes the difficulty—i. e., the necessity of guessing in advance just where and when those cargoes are to be obtained. There is, in the first place, the outgoing cargo of raw material or manufactured goods, and, in the second place, the return cargo of agricultural

staples. If a system could be devised whereby the incoming and outgoing cargoes could be synchronised, so as to follow one another consecutively, the freights could then be handled to economic advantage, and consequently afford a fair profit to the shipowner at a minimum rate. But the uncertainty of obtaining the cargoes in the order named sometimes compels the ships to make an outgoing or an incoming trip carrying ballast. And right here is one cause for the necessity of a maximum rate. This uncertainty is unquestionably a source of economic loss—an economic loss which falls primarily on the farmers. A loss which could be largely obviated by synchronising the time for the outgoing and incoming cargoes. And the question is, Can this be brought about? Let us see.

It most generally happens that the outgoing cargo of manufactures is destined for the port whence the return cargo of agricultural staples is to be had. It would thus seem that the incoming and outgoing cargoes of an agricultural country might be synchronised to follow one another in the required rotation. But at the present time there is no concerted effort toward this end.

How to bring this about systematically is the question. It would seem to me that this could be done through the cooperative and concerted efforts of (a) the Government departments of agriculture and of commerce and labor; (b) the chambers of commerce and boards of trade; (c) the agricultural associations; (d) the mercantile marine associations; (e) the official data of the International Institute of Agriculture. All these forces, working for the desired end, would be likely to bring about the results aimed at.

It would seem to be within the province of the statesman to work toward this end. Fortunately the time is opportune for such efforts. Formerly polished subtlety, or even seeming subtlety, passed current as statesmanship. But the twentieth century requires, nay demands, of the statesman practical knowledge of economic affairs and prompt action best calculated to promote the economic interests of his country. Therefore if the institute can clearly indicate a line of work which is to serve the economic interests of the nation, it can surely count on the support of the statesman, and all the more so if this work is to serve the economic interests of the world, for with the great increase in international commerce nations are beginning to regard each other more and more in the light of customers. The more prosperous a nation the better customer it is. On this head Benjamin Franklin once said, "The worst thing you can do to a customer is to knock him on the head." And we may add that the best thing you can do is to serve his economic interests.

It is high time to recognize the fact that the economic world, like a great machine shop, must be made to work true in all its parts. The overhead shaft and the countershaft must be straight and true; the journals must be neither too tight nor too loose; all friction points must be properly lubricated; the pulleys on corresponding line, the belts taut but free, and then all is well.

As in the machine shop, so in the world of economics, economic stress of one nation causes economic stress in others, and the welfare of the whole is thereby disturbed and diminished. It is thus clear that the welfare of the whole, of all the nations, best tends to insure the welfare of each of the separate nations.

And a distinct step forward toward economic adjustment was taken by the institute when it began the official publication of its

world crop reports, showing the world's supply of the staples, where the surplus is and where it is required. And now it is to take a further step in this direction by the publication of its Commercial Bulletin.

And in doing this it is essential that the committee bear clearly in mind what purpose this Commercial Bulletin is to serve. It is intended to serve all concerned as a guide toward the understanding of price formation; to show what the ruling price is, and how that price is arrived at. If this be its purpose it will not be sufficient merely to give the ruling prices on the world's market centers; it must also show the factors which go to determine the formation of the prices, and a material factor in their formation is the cost of ocean carriage.

As a preliminary step toward the accomplishment of all this, it appears to me that it would be advisable to have the president of the second commission and the chief of the statistical bureau of the institute visit the principal mercantile marine associations and consult with them with a view to furthering the progress of this work.

Some have objected to this work on the ground that information from unofficial sources should not be used in the institute's statistical bulletins. This, however, need be no bar; for, if the Governments are shown that this information is of economic value to their countries, they will obtain it from the proper sources and send it on officially to the institute.

Further objections have been offered to this scheme of work on the ground of expense. It has been said that if the work here outlined is to be done effectively it would involve quite an outlay for telegraphic expense in obtaining the data and in disseminating them, whereas the mere publication of the ruling prices as at present contemplated involves no such expenditure.

The answer to this is clear. The institute was not established for the purpose of giving useless information because it is cheap. Useless information is not cheap at any price, and information useful toward economic betterment is not dear if it bring that economic betterment, even though it increase the institute's expenditure. It would, indeed, be much cheaper to incur this expenditure than to forego it. The fact is the institute can not forego it. It was established for the purpose of doing this very work, and it would be a breach of faith to substitute in the place of the real work some useless semblance of it.

With the price-formation factors officially and authoritatively given out to all the world by the institute, those concerned will be given that information which, up to now, has been laboriously and scientifically worked out for their own benefit by a few great price manipulators whose monopoly it has been. Once this information is made public their monopoly is gone. It would, therefore, be a mistake for the institute to expend money on giving that part of the information which by itself would be useless and not to expend the necessary amount which would enable it to give information which the world has not now got, which the world should have.

And now that the institute is performing the first part of its labor, now that it is making known the world's supply, it becomes incumbent on it to supplement this work, to complete it by giving not only the world's price, but also the factors which go to determine the world's price.

